



Enabler Release Definition for Charging Enabler

Candidate Version 1.0 – 08 Feb 2007

Open Mobile Alliance
OMA-ERELD-Charging-V1_0-20070208-C

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.

© 2007 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	4
2. REFERENCES	5
2.1 NORMATIVE REFERENCES.....	5
2.2 INFORMATIVE REFERENCES.....	5
3. TERMINOLOGY AND CONVENTIONS	6
3.1 CONVENTIONS.....	6
3.2 DEFINITIONS.....	6
3.3 ABBREVIATIONS	6
4. INTRODUCTION	7
5. DESCRIPTION OF DIFFERENCES FROM PREVIOUS VERSION	8
6. DOCUMENT LISTING FOR CHARGING ENABLER	9
7. MINIMUM FUNCTIONALITY DESCRIPTION FOR THE CHARGING ENABLER.....	10
8. CONFORMANCE REQUIREMENTS NOTATION DETAILS	11
9. ERDEF FOR CHARGING ENABLER - CLIENT REQUIREMENTS.....	12
10. ERDEF FOR CHARGING ENABLER - SERVER REQUIREMENTS.....	13
APPENDIX A. CHANGE HISTORY (INFORMATIVE).....	14
A.1 APPROVED VERSION HISTORY	14
A.2 DRAFT/CANDIDATE VERSION 1.0 HISTORY	14

Figures

Figure 1: Charging Enabler Functional Architecture	10
--	----

Tables

Table 1: Listing of Documents in Charging Enabler	9
Table 2: ERDEF for Charging Client-side Requirements	12
Table 3: ERDEF for Charging Server-side Requirements.....	13

1. Scope

The scope of this document is limited to the Enabler Release Definition of the Charging Enabler V1.0 according to OMA Release process and the Enabler Release specification baseline listed in section 6.

2. References

2.1 Normative References

- [CHRG_3GPP_3GPP2] “3GPP/3GPP2 Charging in OMA”, Version 1.0, OMA-TS-Charging_3GPP_3GPP2-V1_0, Open Mobile Alliance™. URL: <http://www.openmobilealliance.org/>
- [CHRG_AD] “Charging Architecture”, Version 1.0, OMA-AD-Charging-V1_0, Open Mobile Alliance™. URL: <http://www.openmobilealliance.org/>
- [CHRG_OFFLINE] “OMA Offline Charging Interface”, Version 1.0, OMA-TS-Charging_Offline-V1_0, Open Mobile Alliance™. URL: <http://www.openmobilealliance.org/>
- [CHRG_ONLINE] “OMA Online Charging Interface”, Version 1.0, OMA-TS-Charging_Online-V1_0, Open Mobile Alliance™. URL: <http://www.openmobilealliance.org/>
- [CHRG_RD] “Charging Requirements”, Version 1.0, OMA-RD-Charging-V1_0, Open Mobile Alliance™. URL: <http://www.openmobilealliance.org/>
- [IOPPROC] “OMA Interoperability Policy and Process”, Version 1.1, Open Mobile Alliance™, OMA-IOP-Process-V1_1, 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>

2.2 Informative References

- [CHRG_DEPLOYMENT_WP] “White Paper on Charging Deployment Scenarios”, OMA-WP-Charging_Deployment_Scenarios, Open Mobile Alliance™. URL: <http://www.openmobilealliance.org/>
- [OMADICT] “Dictionary for OMA Specifications”, Open Mobile Alliance™, OMA-Dictionary, URL: <http://www.openmobilealliance.org/>

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

The formal notation convention used in sections 9 and 10 to formally express the structure and internal dependencies between specifications in the Enabler Release specification baseline is detailed in [IOPPROC].

3.2 Definitions

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.

Minimum Functionality Description Description of the guaranteed features and functionality that will be enabled by implementing the minimum mandatory part of the Enabler Release.

For definitions of terms not found here, please refer to [OMADICT].

3.3 Abbreviations

AD	Architecture Document
ERDEF	Enabler Requirement Definition
ERELD	Enabler Release Definition
OMA	Open Mobile Alliance™
RD	Requirements Document

4. Introduction

The motivation for the creation of a Charging Enabler was established in the Work Item outlining the effort as; the ability to charge for infrastructure, service and content, is fundamental when creating services using OMA enablers.

This document outlines the Enabler Release Definition for the Charging Enabler and the respective conformance requirements for clients and servers implementing claiming compliance to it as defined by Open Mobile Alliance across the specification baseline.

5. Description of Differences from Previous Version

This is a new enabler release. No previous versions of a Charging enabler exist within the OMA.

6. Document Listing for Charging Enabler

This section is normative.

Doc Ref	Permanent Document Reference	Description
Requirement Document		
[CHRG_RD]	OMA-RD-Charging-V1_0-20041118-C	Requirement Document for Charging Enabler
Architecture Document		
[CHRG_AD]	OMA-AD-Charging-V1_0-20060926-C	Architecture Document for Charging Enabler
Technical Specifications		
[CHRG_OFFLINE]	OMA-TS-Charging_Offline-V1_0-20070208-C	Specification that defines the protocol for Charging that provides control interface between the Charging Enabler User and Charging Infrastructure in Offline scenarios
[CHRG_ONLINE]	OMA-TS-Charging_Online-V1_0-20060926-C	Specification that defines the protocol for Charging that provides control interface between the Charging Enabler User and Charging Infrastructure in Online scenarios
[CHRG_3GPP_3GPP2]	OMA-TS-Charging_3GPP_3GPP2-V1_0-20060926-C	Specification that describes how the OMA Charging enabler specifications shall be used when interfacing to a 3GPP/2 type Charging infrastructure
White Paper		
[CHRG_DEPLOYMENT_WP]	OMA-WP-Charging_Deployment_Scenarios-20060926-C	Whitepaper on Deployment Scenarios for Charging

Table 1: Listing of Documents in Charging Enabler

7. Minimum Functionality Description for the Charging Enabler

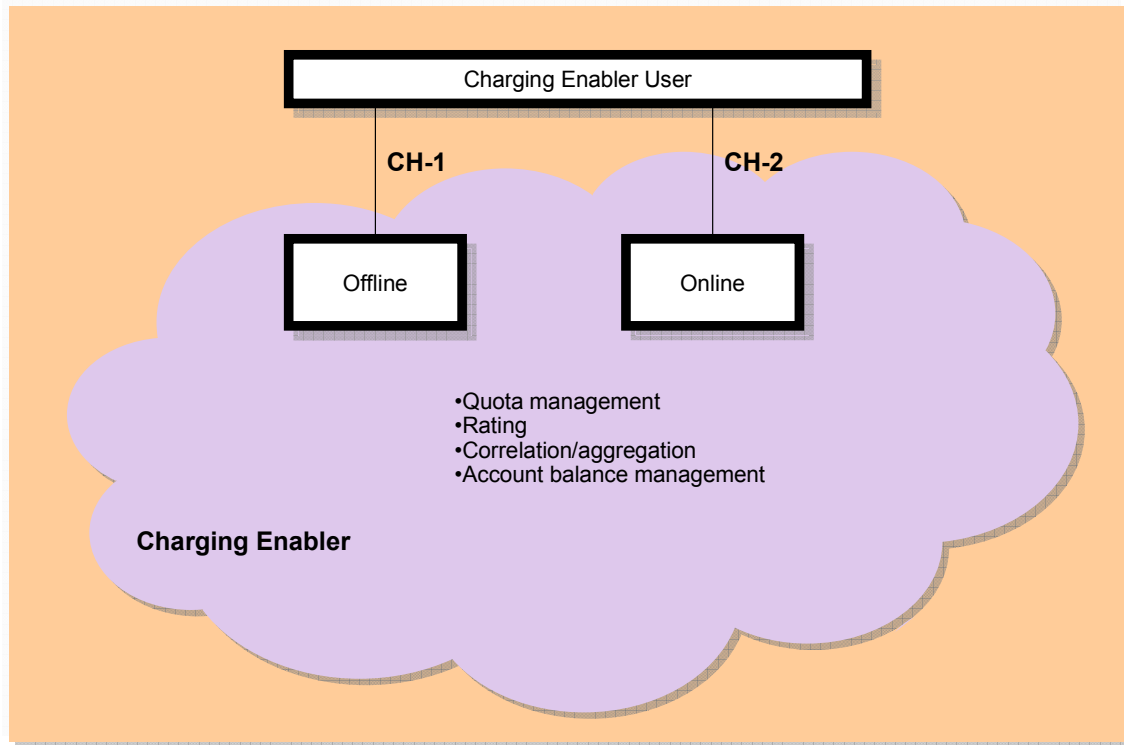


Figure 1: Charging Enabler Functional Architecture

Figure 1 shows the functional architecture of the Charging Enabler. The Charging Enabler supports both online and offline charging methods. For either method, any of the charging functions listed may be applied by the Charging Enabler. The charging functions are described in [CHRG_AD].

The flow of charging events is such that they are generated by a charging enabler user as the result of a user consuming a service. The event will then be processed and potentially modified by some combination of the charging functions.

This functional architecture applies to both online and offline charging.

8. Conformance Requirements Notation Details

This section is informative

The tables in following chapters use the following notation:

- Item:** Entry in this column MUST be a valid ScrItem according to [IOPPROC].
- Feature/Application:** Entry in this column SHOULD be a short descriptive label to the **Item** in question.
- Status:** Entry in this column MUST accurately reflect the architectural status of the **Item** in question.
- M means the **Item** is mandatory for the class
 - O means the **Item** is optional for the class
 - NA means the **Item** is not applicable for the class
- Requirement:** Expression in the column MUST be a valid TerminalExpression according to [IOPPROC] and it MUST accurately reflect the architectural requirement of the **Item** in question.

9. ERDEF for Charging Enabler - Client Requirements

This section is normative.

Item	Feature / Application	Status	Requirement
OMA-ERDEF-Charging-C-001	Online Charging Client	O*	[CHRG_ONLINE]
OMA-ERDEF-Charging-C-002	Offline Charging Client	O*	[CHRG_OFFLINE]

Table 2: ERDEF for Charging Client-side Requirements

* At least one of these is required

10.ERDEF for Charging Enabler - Server Requirements

This section is normative.

Item	Feature / Application	Status	Requirement
OMA-ERDEF-Charging-S-001	Online Charging Server	M	[CHRG_ONLINE]
OMA-ERDEF-Charging-S-002	Offline Charging Server	O	[CHRG_OFFLINE]

Table 3: ERDEF for Charging Server-side Requirements

Appendix A. Change History (Informative)

A.1 Approved Version History

Reference	Date	Description
n/a	n/a	No prior version

A.2 Draft/Candidate Version 1.0 History

Document Identifier	Date	Sections	Description
Draft Versions OMA-ERELED-Charging-V1_0	25 Jan 2006	n/a	Initial draft of the ERELD.
	07 Apr 2006	ALL	New updated Architecture picture and update of content.
	19 Apr 2006	n/a	No change to ERELD. Charging Deployment Scenarios White Paper added to draft Enabler Release package.
	17 May 2006	6	References to AD and TSes updated to point to the newest revisions.
	25 Aug 2006	2, 6	Updated in line with consistency review comments ERELD-001 and ERELD-002 (see OMA-CONRR-Charging-V1_0-20060608-D).
Candidate Version OMA-ERELED-Charging-V1_0	26 Sep 2006	n/a	Status changed to Candidate by TP: TP ref. # OMA-TP-2006-0305- INP_Charging_V1_0_ERP_for_Candidate_Approval
	08 Feb 2007	n/a	Changes to: OMA-TS-Charging_Offline-V1_0-20060926-C TP notified as OMA-TP-2007-0088R01