



# Enabler Release Definition for Converged IP Messaging (CPM)

## Candidate Version 2.0 – 13 Jan 2015

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**Open Mobile Alliance**  
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# 1. Scope

The scope of this document is limited to the Enabler Release Definition of the Converged IP Messaging (CPM) Enabler version 2.0 according to OMA release process and the Enabler Release specification baseline listed in section 5.

## 2. References

### 2.1 Normative References

- [OMA-CPM-AD] “Converged IP Messaging Architecture”, Open Mobile Alliance™, OMA-AD-CPM-V2\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA-CPM-RD] “Converged IP Messaging Requirements”, Open Mobile Alliance™, OMA-RD-CPM-V2\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA-CPM-SD] “Converged IP Messaging System Description”, Open Mobile Alliance™, OMA-TS-CPM\_System\_Description-V2\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA-CPM-TS-CONV] “CPM Conversation Functions”, Open Mobile Alliance™, OMA-TS-CPM\_Conv\_Funct-V2\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA-CPM-TS-ITW] “CPM Interworking”, Open Mobile Alliance™, OMA-TS-CPM\_Interworking-V2\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA-CPM-TS-MSGSTOR] “CPM Message Storage”, Open Mobile Alliance™, OMA-TS-CPM\_MessageStorage-V2\_0, [URL:http://www.openmobilealliance.org/](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](http://www.ietf.org/rfc/rfc2119.txt)
- [SCRRULES] “SCR Rules and Procedures”, Open Mobile Alliance™, OMA-ORG-SCR\_Rules\_and\_Procedures-V1\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)

### 2.2 Informative References

- [OMADICT] “Dictionary for OMA Specifications”, Open Mobile Alliance™, OMA-ORG-Dictionary-V2\_7, [URL:http://www.openmobilealliance.org/](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”, “Release Version Overview” and “Conformance Requirements Notation Details”, are normative, unless they are explicitly indicated to be informative.

The formal notation convention used in sections 8 and 9 to formally express the structure and internal dependencies between specifications in the Enabler Release specification baseline is detailed in [SCRRULES].

### 3.2 Definitions

<b>CPM Address</b>	See [OMA-CPM-RD].
<b>CPM Ad-hoc Group</b>	See [OMA-CPM-RD].
<b>CPM Chat Message</b>	See [OMA-CPM-RD].
<b>CPM Conversation</b>	See [OMA-CPM-RD].
<b>CPM Message</b>	See [OMA-CPM-RD].
<b>CPM Pre-defined Group</b>	See [OMA-CPM-RD].
<b>CPM Session</b>	See [OMA-CPM-RD].
<b>CPM Session History</b>	See [OMA-CPM-RD].
<b>CPM Standalone Message</b>	See [OMA-CPM-RD].
<b>CPM User</b>	See [OMA-CPM-AD].
<b>Device</b>	See [OMADICT].
<b>Enabler Release</b>	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.
<b>Immediate Messaging</b>	See [OMADICT].
<b>Media</b>	See [OMA-CPM-RD].
<b>Media Object</b>	See [OMA-CPM-AD].
<b>Media Stream</b>	See [OMA-CPM-AD].
<b>Media Stream Type</b>	See [OMA-CPM-AD].
<b>Media Type</b>	See [OMADICT].
<b>Minimum Functionality Description</b>	Description of the guaranteed features and functionality that will be enabled by implementing the minimum mandatory part of the Enabler Release.
<b>Non-CPM Communication Service</b>	See [OMA-CPM-RD].
<b>Principal</b>	See [OMADICT].
<b>User Preferences Profile</b>	See [OMA-CPM-RD].
<b>VAS Application</b>	See [OMA-CPM-AD].

### 3.3 Abbreviations

<b>CPM</b>	Converged IP Messaging
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<b>ERDEF</b>	Enabler Requirement Definition
<b>ERELED</b>	Enabler Release Definition
<b>MMS</b>	Multimedia Messaging Service
<b>OMA</b>	Open Mobile Alliance
<b>SD</b>	System Description
<b>SMS</b>	Short Message Service
<b>VAS</b>	Value Added Service

## 4. Release Version Overview

The CPM Enabler provides common building blocks, by reuse of existing blocks and by defining new ones, to allow for both the consolidation of present and the creation of future interpersonal interactive multimedia communication services which accommodate different user experiences such as deferred and Immediate Messaging, session-based messaging, and half duplex/full duplex conferencing.

As CPM is architected as an extensible, phased framework, not all of the following items are supported in this release. More detail on this release can be found in the next subsection.

CPM supports one-to-one, one-to-many personal communications, and also communication with VAS Applications.

CPM enables the creation of services that allow users to:

- communicate without knowing what network access technology is being used,
- have parallel conversations,
- concurrently associate several devices with themselves,
- catch up with missed conversations
- personalise their services by setting preferences to indicate, for example, which device(s) messages should be sent to,
- store any type of message and Media in the network, and
- seamlessly make the transition from legacy voice, video and messaging services such as MMS and SMS to CPM based services by providing interworking between CPM and these legacy services.

The efficient use of resources (e.g. radio bandwidth) by all of CPM's features will be taken into consideration in the design of the CPM Enabler.

### 4.1 Version 1.0 Functionality

CPM Enabler version 1.0 offers:

- support for the following CPM conversation requirements:
  - Immediate Messaging and deferred delivery messaging (with temporary server storage and subsequent delivery).
  - Exchanging files with multimedia contents after explicit recipient authorization (file transfer feature).
  - One-to-one and one-to-many CPM Conversations among CPM Users with the selection of any kind of Media (single or multiple).
  - Add or remove Media Streams at the CPM Session initiation and at any time during a CPM Session.
  - Add or remove users at any time during a CPM Session.
- support for discrete (e.g. text, image, video clip, audio clip, voice clip, binary file) Media Types and continuous (e.g. bidirectional voice, streaming video) Media Stream Types.
- support for the initiation of CPM Conversations for CPM Pre-defined Groups and CPM Ad-hoc Groups, which can be modified during CPM Conversations.
- support for CPM Users to set up several User Preferences Profiles like Office, Home, Meeting, etc. to which the preferences of the CPM User are associated.
- an environment supporting multiple CPM Addresses and multiple Devices aiming for best user experience in today's heterogeneous world for services, networks and Devices.

- interaction with the Presence Enabler.
- support for interworking with Non-CPM Communication Services.
- inclusion of a network-based storage for CPM Standalone Messages and CPM Session Histories, including any Media Objects attached to them. All these data can be synchronized to all the Devices of the CPM User. The storage capabilities are subject to the preferences of the CPM User and service provider policies.
- support for interoperability between multiple networks, i.e. CPM Conversations between Principals from different CPM service providers.

## 4.2 Version 2.0 Functionality

CPM Enabler version 2.0 adds the following features:

- Chat enhancements:
  - Support for notifications within the chat such as “isComposing” and disposition notifications (i.e. delivered, displayed), with a seamless delivery for interworking with SIMPLE IM V2.0
  - Support for storing chat messages and associated notifications while a chat participant is not available (e.g. lost coverage, not registered in IMS) or missed chat
  - Support for delivery of stored chat messages and disposition notifications once the recipient becomes available
  - Group chat features for support of CPM Closed Group Session, CPM Long-lived Session
  - Enhanced multi-device functionality for chat (forking in case of auto-answer)
  - Support for live recording of chat messages
  - Seamless chat experience (backward compatibility with SIMPLE IM V2.0)
  - Interworking over the NNI with SIMPLE IM V2.0 chat
- CPM File Transfer enhancements:
  - Support CPM File Transfer while having an ongoing CPM Session.
  - Support CPM File Transfer to off-line recipients
  - Support CPM File Transfer termination independently without impact an ongoing CPM Session, or vice versa.
  - Support CPM File Transfer termination by either sender or recipient
  - Support the request by either sender or recipient to resume an interrupted CPM File Transfer
  - Support for sending a thumbnail image in the invitation of the content to be transferred
  - Explicit support for file size, file name, and type in a CPM File Transfer request.
  - Define a maximum file size policy.
  - Support multi device CPM File Transfer request and termination, with cancellation to all remaining devices after one of the devices accepts
- Enhanced CPM Standalone Message support:
  - Enhanced multi-device functionality for sending delivery notifications and read reports towards the device that originated the CPM Standalone Message.

- Backward compatibility of version 2.0 with CPM Version 1.0 excludes support of session history object as defined in CPM version 1.0. This has been replaced in CPM version 2.0 by the session history folder and session info object.

## 5. Document Listing for CPM

This section is normative.

Doc Ref	Permanent Document Reference	Description
<b>Requirement Document</b>		
[OMA-CPM-RD]	OMA-RD-CPM-V2_0-20130611-C	Requirement Document of the CPM Enabler
<b>Architecture Document</b>		
[OMA-CPM-AD]	OMA-AD-CPM-V2_0-20130611-C	Architecture Document of the CPM Enabler
<b>Technical Specifications</b>		
[OMA-CPM-TS-CONV]	OMA-TS-CPM_Conversation_Function-V2_0-20150113-C	Specification that defines the CPM Controlling Function and the Participating Function, for client & server.
[OMA-CPM-TS-ITW]	OMA-TS-CPM_Interworking_Function-V2_0-20150113-C	Specification that defines the CPM Interworking Selection Function and the Interworking Function.
[OMA-CPM-TS-MSGSTOR]	OMA-TS-CPM_Message_Storage-V2_0-20150113-C	Specification that defines the CPM Message Storage Functions, for client & server.
[OMA-CPM-SD]	OMA-TS-CPM_System_Description-V2_0-20150113-C	Specification that describes system concepts, defines central data elements, and provides related procedures of the CPM Enabler.

**Table 1: Listing of Documents in CPM Enabler**

## 6. OMNA Considerations

CPM includes the following OMNA items:

1. PUSH Application Id
  - a. Number: 0x15
  - b. URN: x-oma-application:cpm.ua
  - c. Description: OMA CPM
2. CPM service capabilities publication through OMA Presence Enabler [OMA PRES] use the following <service-description> child elements in the presence document, according to [OMA PDE]:

For CPM Standalone capabilities:

```
→<service-id>→org.openmobilealliance:StandaloneMsg  
→<version>→2.0
```

For CPM Session capabilities:

- CPM Session:

```
→<service-id>→org.openmobilealliance:ChatSession  
→<version>→2.0
```

For CPM File Transfer capabilities:

```
→<service-id>→org.openmobilealliance:File-Transfer  
→<version>→2.0  
→<service-id>→org.openmobilealliance:File-Transfer-thumb  
→<version>→2.0
```

## 7. 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 [SCRRULES].
- Feature/Application:** Entry in this column **SHOULD** be a short descriptive label to the **Item** in question.
- Requirement:** Expression in the column **MUST** be a valid `TerminalExpression` according to [SCRRULES] and it **MUST** accurately reflect the architectural requirement of the **Item** in question.

## 8. ERDEF for CPM – Client Requirements

This section is normative.

Item	Feature / Application	Requirement
OMA-ERDEF-CPM-C-001-M	CPM Client	CPM-CF:MCF
OMA-ERDEF-CPM-C-002-O	CPM Message Storage Client	CPM-TS-MS:MCF

**Table 2: ERDEF for CPM Client-side Requirements**

## 9. ERDEF for CPM – Server Requirements

This section is normative.

Item	Feature / Application	Requirement
OMA-ERDEF-CPM-S-001-M	CPM Participating Function	CPM-CF-PF:MSF
OMA-ERDEF-CPM-S-002-M	CPM Controlling Function	CPM-CF-CF:MSF
OMA-ERDEF-CPM-S-003-O	Message Storage Server	CPM-TS-MS:MSF
OMA-ERDEF-CPM-S-004-O	Interworking Selection Function	CPM-TS-Isf:MSF
OMA-ERDEF-CPM-S-005-O	Interworking Function	CPM-TS-Int:MSF

**Table 3: ERDEF for CPM Server-side Requirements**

## Appendix A. Change History (Informative)

### A.1 Approved Version History

Reference	Date	Description
OMA-ERELED-V1_0-20120612-A	12 Jun 2012	Status changed to Approved by TP: OMA-TP-2012-0221R01-INP_CPM_V1_0_ERP_for_Final_Approval

### A.2 Draft/Candidate Version 2.0 History

Document Identifier	Date	Sections	Description
Draft Versions: OMA-ERELED-CPM-V2_0	13 Dec 2012	all	Initial version of the CAM ERELD
	14 Dec 2012	5	Document Listing updated
	21 Dec 2012	5	Document Listing updated
	23 Jan 2013	5	Document Listing updated
	24 Jan 2013	5	Document Listing updated
	26 Feb 2013	5	Document Listing updated
	15 Mar 2013	5	Document Listing updated
	25 Mar 2013	5	Document Listing Updated
	09 May 2013	5	Document Listing Updated
	23 May 2013	5	Document Listing Updated
	24 May 2013	5	Document Listing Updated
	31 May 2013	5	Document Listing Updated
Candidate Version: OMA-ERELED-CPM-V2_0	11 Jun 2013	All	Status changed to Candidate by TP TP Ref # OMA-TP-2013-0163R01- INP_Converved_IP_Messaging_2.0_ERP_and_ETR_Candidate_Approval
Draft Version: OMA-ERELED-CPM-V2_0	07 Jan 2015	5	Editorial update of permanent document references in section 5
Candidate Version: OMA-ERELED-CPM-V2_0	13 Jan 2015	All	Status changed to Candidate by TP TP Ref # OMA-TP-2015-0002- INP_CPM_V2_0_ERP_for_Candidate_re_approval