Converged IP Messaging Requirements

Candidate Version 2.2 – 26 Sep 2017

Open Mobile Alliance

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1. Scope (Informative)

This document defines the requirements for the Converged IP Messaging (CPM) Enabler.

The aim of the CPM Enabler is to reuse existing and define new reusable building blocks to be able to create a variety of interpersonal, interactive, multimedia communication services that run on top of an IP network. It will be possible for third party Applications to use these capabilities, and these third party Applications also can interact with CPM Users as Participants.

The CPM Enabler aims to provide the functionality for:

- a consistent user experience across many service domains for all IP networks (mobile, home, Internet worlds) by addressing the service constraints in a bearer-agnostic manner
- interoperability between different service providers, including roaming conditions
- supporting the creation and exchange of charging information
- allowing users to be unaware of the underlying technology used for communication
- centralized network based message store as a permanent repository for a CPM User's communication history
- multi-device environment for a CPM User
- seamless communication with Non-CPM Users using legacy messaging services such as SMS and MMS
- third party application development using CPM Enabler as a transport platform for value adding services

The CPM Enabler is targeted to build upon the user experiences provided by the following services:

- text and/or multimedia messaging enabled services: e.g. SMS, IMPS, SIMPLE IM, Email, MMS
- voice-enabled services: e.g. PoC, VoIP
- video-enabled service: e.g. Video telephony, webcam, Video streaming

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2. References

2.1 Normative References

[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

[OMADICT] "Dictionary for OMA Specifications", Version 2.9, Open Mobile Alliance™, OMA-ORG-Dictionary-V2_9, URL:http://www.openmobilealliance.org/

[OMA Presence] "Presence SIMPLE", Version 2.0, Open Mobile Alliance™, OMA-ERELD-Presence_SIMPLE-V2_0, URL:http://www.openmobilealliance.org/

[OMA SIMPLE IM] "Instant Messaging using SIMPLE", Open Mobile Alliance™, OMA-ERELD-SIMPLE_IM-V2_0, URL:http://www.openmobilealliance.org/

[OMA XDM] "XML Document Management", Version 2.0, Open Mobile Alliance™, OMA-ERELD-XDM-V2_0, URL:http://www.openmobilealliance.org/

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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.

3.2 Definitions

1-1 CPM Conversation	A CPM Conversation where one Participant communicates with another Participant.
1-N CPM Conversation	A CPM Conversation with many Participants and in which all Participants communicate with one another.
Authorized Principal	See [OMADICT].
Charging Correlation	See [OMADICT].
Charging Event	See [OMADICT].
Communication Capabilities	Set of communication means (e.g. text, video…) available to the CPM User.
Content Screening	The act of blocking, allowing or amending content.
Converged Address Book	A set of entries called "contacts" commonly available to any registered device. Each contact entry consists of a set of static and/or dynamic information (e.g. name, address, Presence Subscription information, display name). Entries in the database support various addresses from different addressing schemes.
CPM Ad-hoc Group	A set of CPM Addresses that is temporarily set up (e.g. at communication initiation).
CPM Address	An identifier for a unique Principal that allows participation in CPM Conversations.
CPM Capability	Service identifiers for each of the CPM communication capabilities.
CPM Chat Message	Information that is sent to one or more recipients as part of an existing CPM Session. A CPM Chat Message can contain several discrete Media (e.g. text, images, audio-clips, video-clips). Note: CPM Chat Messages and CPM Standalone Messages do not differ regarding the media they can carry. The primary difference is that they are used in different contexts.
CPM Closed Group Session	CPM Group Session with a CPM Ad-hoc Group, which does not accept addition of new participants throughout the existence of the CPM Group Session.
CPM Conversation	The exchange of CPM Standalone Messages, CPM File Transfers, and/or CPM Sessions, associated with each other due to common characteristics, between two or more Participants (e.g. CPM Users or Applications).
CPM Conversation History	Stored representation of a CPM Conversation.
CPM File Transfer	The process of transferring one or more files with discrete Media contents between Users, whereby the recipient explicitly has to acknowledge his/her willingness to receive the file(s) before any data is transferred.
CPM File Transfer History	Stored representation of a CPM File Transfer.
CPM Group	A CPM Pre-defined Group or a CPM Ad-hoc Group.
CPM Long-lived Group Session	CPM Group Session that can be restarted at any time by any one of the participants.
CPM Group Session Access Key	A key (e.g. represented as a QR Code, or a digit sequence) associated with a specific CPM Group Session, which contains the necessary information (such as group identifier, expiry time, etc.) to join that CPM Group.
CPM Group Membership Rules	A set of policies and attributes for controlling the CPM Group Session participation, which defines the allowed actions of Participants during the CPM Group Session.

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CPM Group Session	A CPM Session established for a CPM Group.
CPM Message	A CPM Chat Message or a CPM Standalone Message.
CPM Pre-defined Group	A container for a predefined set (possibly empty) of Principals, group information (e.g. subject), and CPM Group Membership Rules. A CPM Pre-defined Group is a Principal identified via a single persistent CPM Address.
CPM Session	A real-time interaction between two or more Participants during which a combination of CPM Chat Messages and/or continuous Media may be exchanged.
CPM Session History	Stored representation of the content exchanged during a CPM Session.
CPM Session Invitation	A request sent by a Principal (the inviter) to one or more other Principals (the invitee(s)). This request can be sent either to establish a CPM Session between the inviter and the invitee(s) or to solicit the invitee(s) to join an existing CPM Session.
CPM Standalone Message	Information that is sent to one or more recipients as a standalone entity. A CPM Standalone Message can contain several discrete Media (e.g. text, images, audio-clips, video-clips). Note: CPM Chat Messages and CPM Standalone Messages do not differ regarding the media they can carry. The primary difference is that they are used in different contexts.
CPM System	An implementation of the CPM Enabler, together with other individual system elements (e.g. other Enablers, interworking functions and interfaces).
CPM User	User of a CPM-based Service.
CPM User Activity	Any CPM User generated interaction with the device showing that the CPM User is actively using the device.
Deferred CPM Message	A CPM Message that is temporarily stored in the network until the intended recipient becomes available or decides what needs to be done with the message or until the CPM Message expires. Note: The concept of a Deferred CPM Message is an extension of the deferred message concept in [OMA SIMPLE IM].
Immediate Messaging	See [OMADICT].
Malware	Malicious software or message(s) conceived to infiltrate, disrupt, consume resources or damage a computerized system and/or network. A Malware can take on a variety of forms and includes but is not limited to computer viruses, worms, Trojan horses, spyware, adware, and other forms of malicious software or data.
Media	Digital means by which information is packaged. Media may come in different forms, which are referred to as Media Types.
Media Type	See [OMADICT].
Non-CPM Communication Service	A communication service with which the CPM Enabler interworks (e.g. SMS, MMS, Instant Messaging, Push To Talk, email, VoIP, Video-over-IP).
Offline Charging	See [OMADICT].
Online Charging	See [OMADICT].
Participant	See [OMADICT].
Presence Information	See [OMA Presence].
Presence Subscription	See Subscription definition in [OMA Presence].
Primary Device	The device containing an UICC which provides the primary identity of the subscription. The primary device supports the legacy SMS/MMS services
Primary Identity	The public user identity used by the CPM User to access the CPM Enabler functionalities, across primary and secondary devices. It is typically based on an MSISDN (or a SIP URI based on the MSISDN).
Principal	See [OMADICT].
Pseudonym	An identifier in a human readable form, associated with a CPM Address, that a user can negotiate for himself. For example, the Pseudonym can be used to participate in CPM Group Sessions anonymously.
Public Chat Room	A CPM Group Session established for a CPM Pre-defined Group that has no fixed list of members.

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	Any additional device used to access CPM Enabler with the primary identity.
Secondary Device	The secondary devices typically do not support the legacy SMS/MMS services under the Primary Identity (e.g. PCs, Tablets, TVs).
Undelivered Content Notification	A CPM notification sent via SMS to inform the CPM User on a Primary Device without IP connectivity that a CPM Message or CPM File Transfer was received, but the non-text content cannot be delivered via the current access conditions of the Primary Device.
Unwanted Messaging (spam)	Abuse of electronic messaging services to send (usually in bulk) messages unwanted by the recipient(s), e.g. an e-mail server can be used to propagate unwanted or unrequested messages to any number of end-users (recipients). Unwanted messages are not limited to e-mail and include all forms of messages. In many cases, the originator of the messages attempts to conceal or mislead the recipients as to the origin of the message(s) though it is not always the case.
User Communication Preferences	The preferences that the CPM User sets regarding the way he prefers to communicate.
User Preferences Profile	A set of user settings which controls aspects of how a user perceives and receives services; a user may have several such profiles.
Value Added Service	See [OMADICT].
Value Added Service Provider	See [OMADICT].

3.3 Abbreviations

3GPP	3rd Generation Partnership Project
3GPP2	3rd Generation Partnership Project 2
CAB	Converged Address Book
CPM	Converged IP Messaging
CS	Circuit Switched
DRM	Digital Rights Management
IETF	Internet Engineering Task Force
IM	Instant Messaging or Instant Message
IMPS	Instant Message and Presence Service
IMS	IP Multimedia Subsystem
IP	Internet Protocol
MMS	Multimedia Messaging Service
MSISDN	Mobile Subscriber ISDN Number (per 3GPP Vocabulary TS 21.905)
OMA	Open Mobile Alliance
PC	Personal Computer
PDA	Personal Digital Assistant
PLMN	Public Land Mobile Network
PoC	Push-to-talk over Cellular
PSTN	Public Switched Telephone Network
SIMPLE	SIP for Instant Messaging and Presence Leverage Extensions
SIP	Session Initiation Protocol
SMS	Short Message Service
TISPAN	Telecommunications and Internet converged Services and Protocols for Advanced Networking
UCN	Undelivered Content Notification

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UICC	Universal Integrated Circuit Card
URI	Uniform Resource Identifier
VAS	Value Added Service
VASP	Value Added Service Provider
VoIP	Voice over IP
XDM	XML Document Management
XML	eXtensible Markup Language

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4. Introduction (Informative)

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.

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

CPM enables the creation of services that allow users to:

- communicate without knowing what network access technology is being used,
- have parallel conversations, each with different Media Types,
- concurrently associate several devices with themselves,
- personalize their services by setting preferences,
- 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.

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.

The CPM Enabler will provide the following functions:

1. **User Addressing and Multi-device environment (N:M scenario):** Aiming for best user experience in today's heterogeneous world for services, networks and devices, the CPM Enabler supports a multi-addresses and multi-devices environment. Therefore the CPM Enabler supports the following addressing scenarios:
    - Handling of single or multiple addresses on a single device.
    - Handling of single or multiple addresses on multiple devices.
    - Support for receiving different Media Types over different devices on a per user basis.

    The above scenarios can be realized with a single or multiple access points. User preferences are a way to provide for address/device/access point selection. The user's capability for device selection in conversation can be controlled via user preferences.
2. **Conversation Handling:** The CPM Enabler supports the following conversation requirements:
    - Immediate and Deferred Messaging (with temporary server storage of CPM Conversation and subsequent delivery; with mailbox storage, notification, and subsequent retrieval).
    - Exchanging files with multimedia contents after explicit recipient authorization (file transfer feature).
    - 1-1, 1-N, and 1-Application CPM Conversation with the selection of any kind of Media (single or multiple).
    - Add or remove Media at the invocation and any time during a CPM Conversation.
    - Add or remove users at the invocation and any time during a CPM Conversation.
    - Start a CPM Conversation by sending a CPM Standalone Message or establishing a CPM Session.
    - Change of user's device during a CPM Conversation without disrupting the conversation.
3. **Presence Support:** The CPM Enabler provides a flexible interaction with the Presence Enabler. While CPM has to provide the needed support for presence, the invocation of the service itself does not require the presence service, and does not mandate an always-on condition for the CPM Users.
4. **Media Support:** CPM supports discrete (text, images, video clip, audio clip, voice clip, binary files) and continuous (e.g. bidirectional voice, streaming video) Media.
5. **Group Communication and Management:** The CPM Enabler supports the invocation of CPM Group Conversation for CPM Pre-defined and Ad-hoc Groups, which can be modified during CPM Conversations.

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6. **Interworking with Non-CPM Communication Services:** The CPM Enabler defines interworking with Non-CPM Communication Services.
7. **Network-based Message Storage:** CPM aims to provide a consistent user experience and it therefore includes a network-based storage for:
    - The Media.
    - The CPM Conversation Histories which include stored CPM Standalone Messages, CPM File Transfer Histories and CPM Session Histories (e.g. stored with contact, time, messages, shared Media to allow filtering of histories to user's views).

    All these data can be synchronized to all the devices of the CPM User. The storage capabilities are subject to user preferences and service provider policies.

A device may only be able to support a subset of CPM functionalities depending on the device capabilities.

The CPM Enabler will ensure that the user's privacy is protected, by providing a privacy protection level that is at least equivalent to that provided by similar Enablers. The reuse of existing mechanisms will be considered.

The CPM Enabler must be carefully designed to ensure mechanisms efficiently manage push/pull requests while optimizing message throughput with minimal delay for all data exchanges. Similar existing Enablers have been developed with the same constraints (e.g., PoC, SIMPLE IM, Presence and Mobile Email) and thus the same mechanisms will be reused as required.

This document first captures the use cases covered by the CPM Enabler, and then enumerates specific high level technical requirements which derive from these use cases.

This document also defines some new concepts used to describe the use cases enabled by the CPM Enabler and the requirements that the CPM Enabler will satisfy: these concepts are CPM Conversation, CPM Message, CPM Session, CPM Session History, CPM Conversation History (see also 3.2 Definitions).

The CPM Conversation represents the “live” information exchange that Principals can have exploiting the CPM Enabler functionalities, where this information can be associated together by common characteristics. As represented in the Communication Representation portion of Figure 1, a CPM Conversation is constituted by any number of CPM Standalone Messages, CPM File Transfers and CPM Sessions. A CPM Message is information of a discrete nature that can contain several discrete Media (e.g. text, images, audio-clips, video-clips). CPM Messages can be sent within a CPM Session (as a CPM Chat Message) or outside of a CPM Session (as a CPM Standalone Message), where a CPM Session represents a logical connection between CPM User and other Principal(s) established for a finite duration. A CPM File Transfer is a transfer of one or more files with multimedia contents between two Principals, in which the recipient Principal has to explicitly acknowledge the reception of the files before any data of the files is transferred. In a CPM Session, Principals can also exchange continuous Media, that due to the continuous nature of this type of information, need a logical connection (i.e. with a beginning and an end) to be set up and maintained between CPM User and other Principals. An underlying assumption is that a CPM Conversation should only be composed of one CPM Session at a given time. A user could however participate in several CPM Conversations in parallel (each of them containing one CPM Session) but this is not the intent of this diagram to show that functionality.

The Storage Representation portion of Figure 1 pictures a CPM Conversation History. Authorized Principals can capture and store the information that they have been exchanging during a CPM Conversation as a CPM Conversation History in network-based storage provided by a CPM service provider. As such, a CPM Message may become a stored CPM Message, a CPM File Transfer may become a CPM File Transfer History and continuous Media may become stored Media (e.g. voice-clip, video-clip). When stored CPM Chat Messages and stored Media are part of the same CPM Session, they are associated together in network based storage as a CPM Session History. Stated in another manner, a CPM Conversation History can be described as CPM Session Histories, CPM File Transfer Histories and stored CPM Standalone Messages, derived respectively from the CPM Sessions and any CPM File Transfers and CPM Standalone Messages exchanged outside a CPM Session during a CPM Conversation.

Together, the Communication Representation and the Storage Representation portions of Figure 1 capture the potential of a CPM Conversation and a CPM Conversation History respectively, and the relationship between them.

A detailed representation of the supported messaging features of the CPM Enabler functionality is depicted below:

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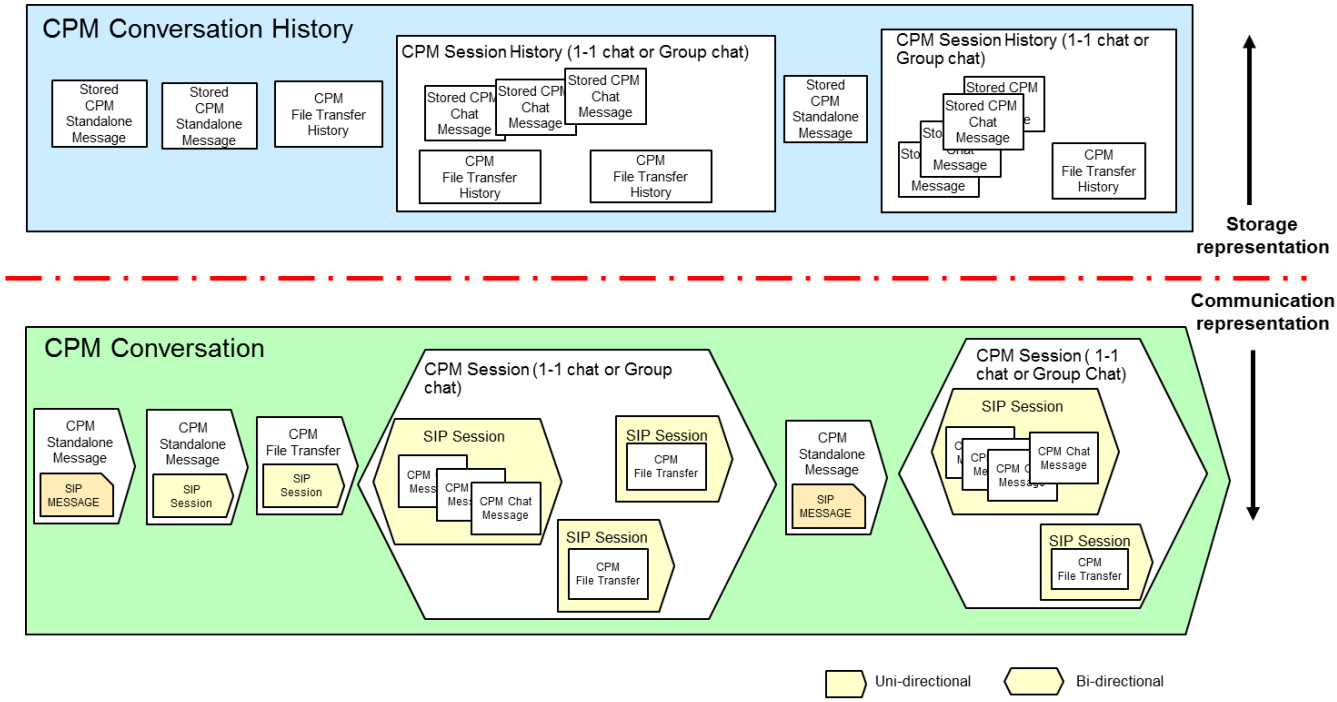

Figure 1: Illustration of the relationship between a CPM Conversation and a CPM Conversation History and depiction of the items they contain

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4.1 Version 1.0

The first version of the CPM Enabler covers the requirements marked as CPM V1.0 in the tables in Section 6. Note that Voice and video are not in the scope of CPM v1.0.

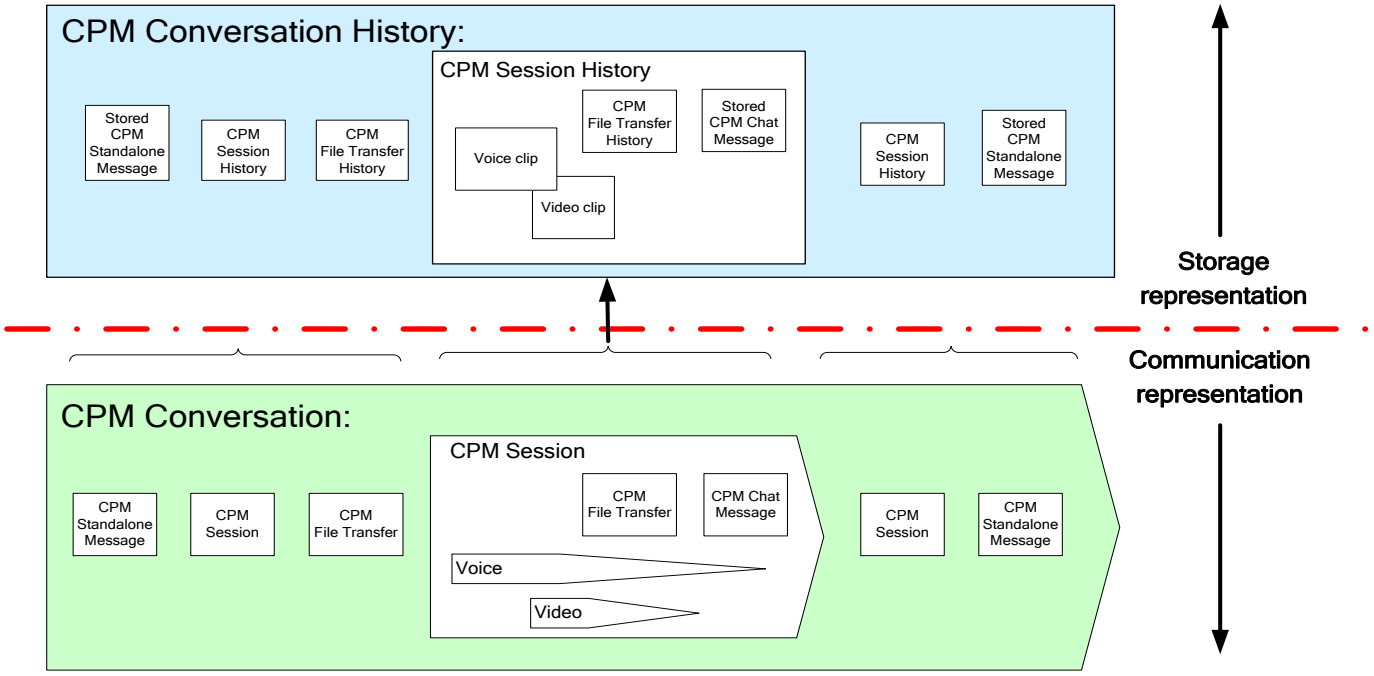

Figure 2: Illustration of the relationship between a CPM Conversation and a CPM Conversation History and depiction of the items they contain, CPM 1.0

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4.2 Version 2.0

The second version of the CPM Enabler covers the requirements marked as CPM V2.0 in the tables in Section 6.

A representation of new functionality such as Long-lived CPM Group Session added in version 2.0 is captured in the figure below. In this example, the Long-Lived CPM Group Session was re-started once.

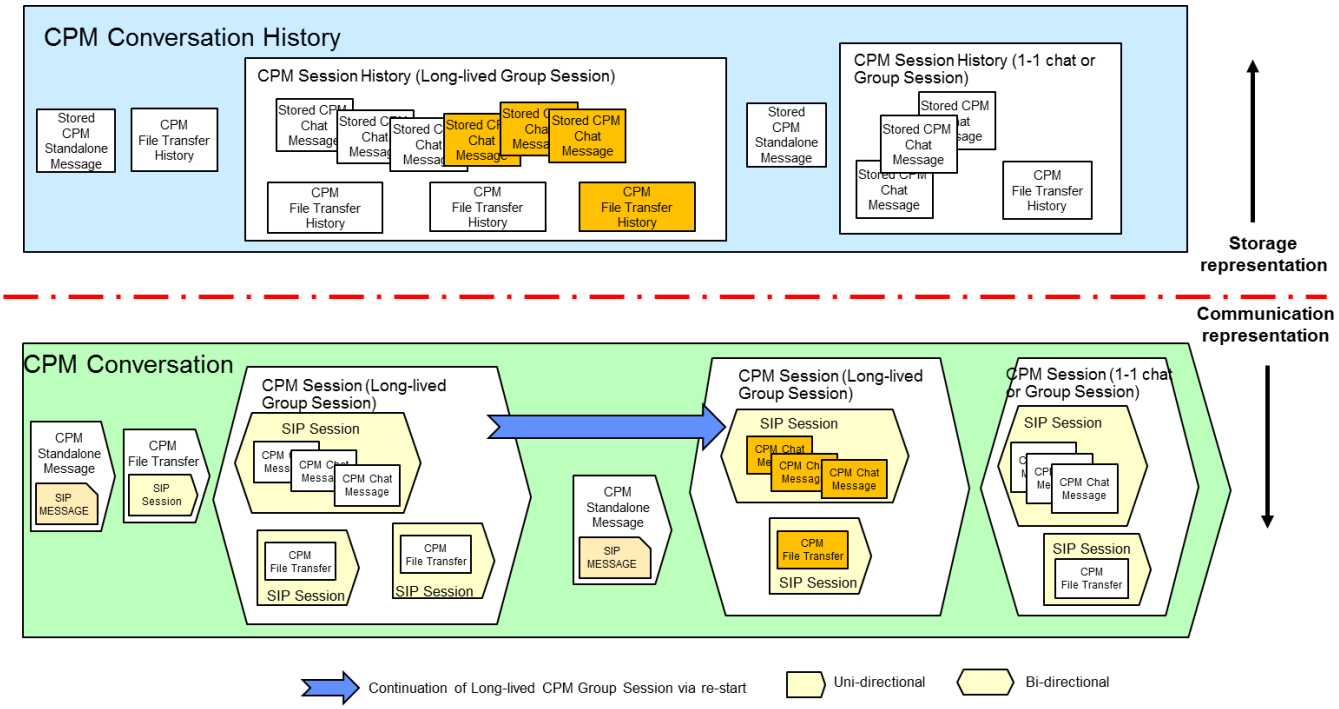

Figure 3: Illustration of the relationship between a CPM Conversation and a CPM Conversation History containing a Long-lived CPM Group Session, CPM 2.0

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5. Release description (Informative)

5.1 Version 2.1

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.

CPM supports one-to-one and one-to-many personal communications.

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,
- personalize their services by setting preferences to indicate, for example, which device(s) messages should be sent to,
- store any type of message and Media, and communication history in the network, and
- seamlessly make the transition from legacy messaging services such as MMS and SMS to CPM based services by providing interworking between CPM and these legacy services.

CPM also provides an event reporting framework.

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.

The following figure shows the actors and their roles for the CPM Enabler.

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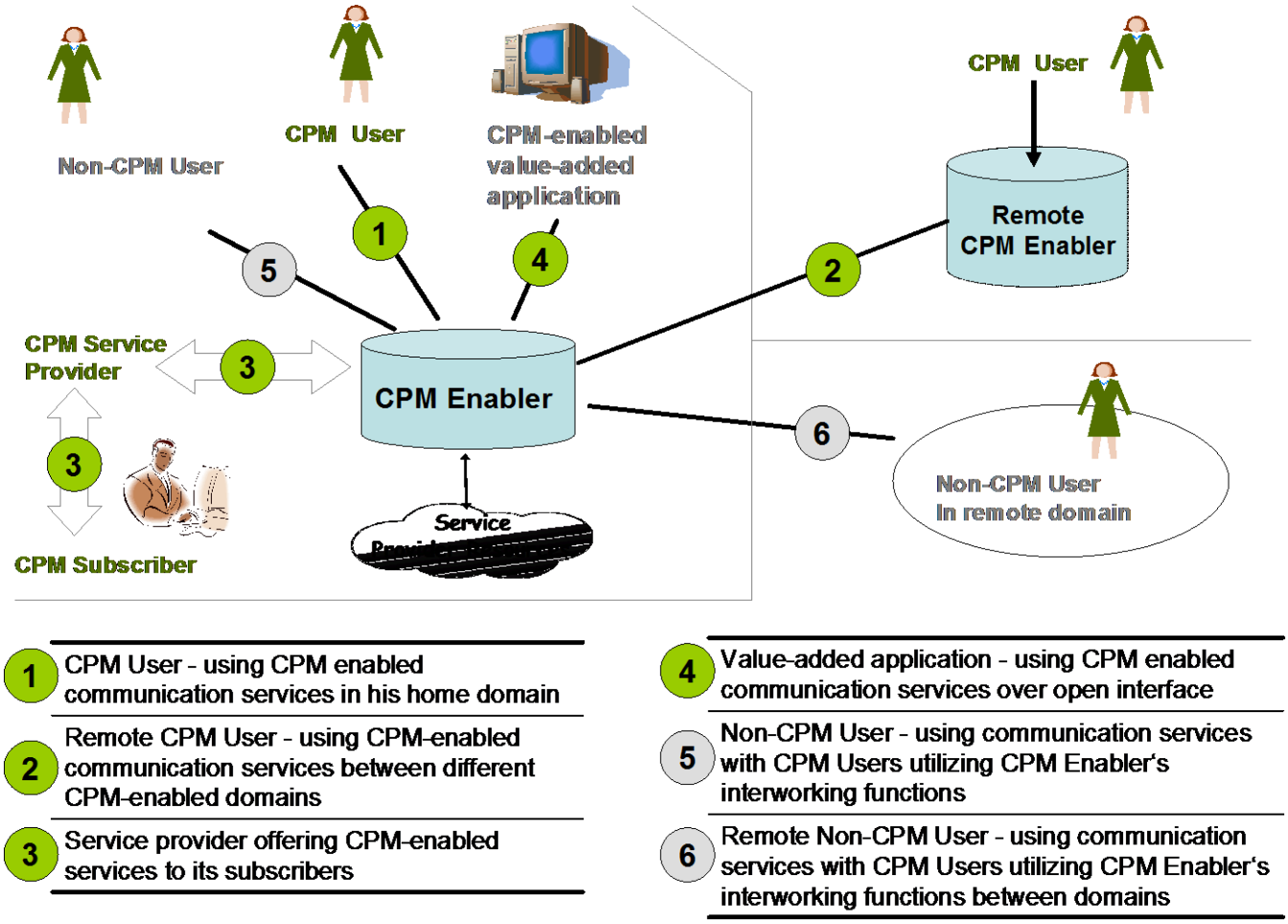

Figure 4: The CPM Enabler – Actors and Roles

5.2 Version 2.2

CPM Enabler version 2.2 Conversation Function provides the following changes and enhancements:

- Support for OMA NMS APIs as RESTful interface and REST-based data model for storing objects in the CPM Message Store, when recording of CPM Standalone Messages, CPM Sessions, CPM File Transfer History and Standalone Media Objects;
- Support for the OMA Charging Enabler (endorsing interfaces Ro and Rf) in CPM architecture;
- CPM Group Session:
    - enhancements to Group Session Data Management (GSDM):
        - Added support for the group chat bulletin;
        - Added procedures for the Group Chat administrator to give this role to another user, or to take it away;
        - Add minimum policies for the user admin support (single admin, any admin);
        - Schema updates for icon to support both URL and direct inclusion of the file icon in the CPM Group Session Data Management information;
    - CPM Group communications enhancements (Group Session and Standalone Message):
        - Support for denoted messages in Group communications via CPIM "cc" header;
    - Optimization decisions:

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        - When supported, propagating the Participant List updates in MSRP SEND packets in an active CPM Group Session, to avoid establishing separate SIP dialogs for the SIP NOTIFY requests towards each Participant (or towards each Participant's connected devices, in multi-device direct delivery cases)
            - This optimizes the CPM Participating Function -CPM Client flow, CPM Controlling Function-CPM Participating Function flow;
        - use the conference event package information as basis for storing Participant Information, CPM Groups Session Data Management information and for transmitting these updates in the CPM Group Session (in MSRP);
- for the case of the direct delivery to multiple user devices (registered and connected in a CPM communication): reinstated the use of instance-ID to reach out to specific CPM User device;
- Bug fixes and corrections from previous releases:
    - add missing procedures for handling of direct delivery to multiple CPM User devices when messages originated by the CPM User have to be forked to all his other registered & connected devices to that CPM Session, CPM Standalone Messages Pager Mode and Large Message Mode;
    - Explicitly clarifying in the procedures for all network entities used in a CPM flow, the mandatory preservation in SIP B2BUA requests/responses, of the conference focus uri (tagged with 'isfocus') in the Contact header field;
    - Alignments with newly published [RFC7647] for handling of in SIP REFER (Refer-Sub header field by network entities along the path in B2BUA flows);
    - Handling of default cases such as empty subject, empty icon, empty bulletin in the CPM Group Session.

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6. Requirements (Normative)

6.1 High-Level Functional Requirements

Label	Description	Enabler Release
CPM-HLF-001	The CPM Enabler SHALL allow an integrated user experience centred around CPM Conversations.	CPM V1.0
CPM-HLF-002a	The CPM Enabler SHALL provide the CPM User with a mechanism to set preferences based on: • his addresses • his devices • the message type • the Media Types	CPM V1.0
CPM-HLF-003	The CPM Enabler SHALL allow the inclusion of URI schemes in a CPM Message.	CPM V1.0
CPM-HLF-004	The CPM Enabler SHALL allow the CPM User to initiate a CPM Conversation using a CPM Address.	CPM V1.0
CPM-HLF-005	The CPM Enabler SHALL allow the CPM User to initiate a CPM Conversation with a non-CPM User using an appropriate address.	CPM V1.0
CPM-HLF-006	The CPM Enabler SHALL allow the CPM User to assign a subject to a CPM Standalone Message or a CPM Session Invitation.	CPM V1.0
CPM-HLF-007	The CPM Enabler SHALL support the indication that the CPM Message is of a sensitive nature. The CPM recipient user may treat the CPM Message accordingly (e.g., not forward it).	CPM V1.0
CPM-HLF-008	The CPM Enabler SHALL support the use of priority indications.	CPM V1.0
CPM-HLF-009	The CPM Enabler SHALL allow an Authorized Principal to request that its identity is not disclosed to the recipient of the CPM Standalone Messages, CPM File Transfers and CPM Sessions initiated by it, if allowed by service provider policies.	CPM V1.0
CPM-HLF-010a	The CPM Enabler SHALL allow a CPM User sending a CPM Standalone Message, to specify one reply-to CPM Address.	CPM V1.0
CPM-HLF-011	The CPM Enabler SHALL support identification of the source CPM Address of received CPM Standalone Messages, CPM File Transfers and CPM Session Invitations.	CPM V1.0
CPM-HLF-012	The CPM Enabler SHALL be able to reject a CPM Standalone Message, a CPM File Transfer or a CPM Session Invitation based on the recipient user's preferences, e.g. originator address (blacklist), undisclosed sender identity, or message type/content.	CPM V1.0
CPM-HLF-013	The CPM User SHALL be able to set and manage his preferences within multiple User Preferences Profiles. User Preferences Profiles may be created according to different scenarios, such as Home, Office, Travel, Sleep, Meeting etc.	CPM V1.0
CPM-HLF-014a	For each of his devices, the CPM User SHALL be able to indicate one of the multiple User Preferences Profiles as the active profile, even if the profile was created using a different device.	CPM V1.0
CPM-HLF-015	The CPM Enabler SHALL allow the CPM User to set his User Communication Preferences. Examples of scope of settings: • Settings applying to all the devices that he chooses • Individual settings per device • Per contact or category of contacts The settings can be grouped inside the User Preferences Profiles.	CPM V1.0

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CPM-HLF-022	The CPM User SHALL be able to request, on a per-message basis, to be notified of delivery or non-delivery of CPM Standalone Messages he/she has sent towards the recipient(s) independent of whether the recipient(s) are CPM Users or Non-CPM Users.	CPM V1.0
CPM-HLF-023	The CPM User SHALL be able to request to be notified when a CPM Standalone Message he/she sent is read by the recipient(s).	CPM V1.0
CPM-HLF-024a	The CPM Enabler SHALL send a delivery notification to the CPM Standalone Message originator, on a per-recipient basis, if requested by the CPM Standalone Message originator.	CPM V1.0
CPM-HLF-024b	The CPM Enabler SHALL send a read report to the CPM Standalone Message originator, on a per-recipient basis, if requested by the CPM Message originator and authorized by the CPM Message recipient.	CPM V1.0
CPM-HLF-028	The CPM User SHALL be able to request, on a per-message basis, to be notified of delivery of CPM Chat Message he/she has sent towards the recipient(s), independent of whether the recipient(s) are CPM Users or non-CPM Users.	CPM V2.0
CPM-HLF-029	The CPM User SHALL be able to request to be notified when each CPM Chat Message he/she sent is read by the recipient(s).	CPM V2.0
CPM-HLF-030	The CPM Enabler SHALL support sending a delivery notification on behalf of a recipient CPM User to the CPM Chat Message originator, on a per-recipient basis, if requested by the CPM Chat Message originator.	CPM V2.0
CPM-HLF-031	The CPM Enabler SHALL send a read report to the CPM Chat Message originator, on a per-recipient basis, if requested by the CPM Chat Message originator and authorized by the CPM Chat Message recipient.	CPM V2.0
CPM-HLF-025	The CPM Enabler SHALL support CPM Conversations between a CPM User and at least: • SMS users • MMS users • SIMPLE IM users • Email users within the capabilities of the Non-CPM Communication Services.	CPM V1.0
CPM-HLF-032	The CPM Enabler SHALL define CPM service-ids with the granularity of supported CPM communication means (e.g. chat, file transfer, standalone, thumbnail), for publication and discovery of CPM Capability through presence [OMA Presence].	CPM V2.0
	CPM Event Reporting Framework:	
CPM-HLF-033a	The CPM Enabler MAY support Event Reporting Framework. When supporting Event Reporting Framework the following requirements are supported accordingly: CPM-HLF-033, CPM-HLF-034, CPM-HLF-035, CPM-HLF-036 and CPM-HLF-037.	CPM V2.1
CPM-HLF-033	The CPM Enabler SHALL support network receipt of event reporting from CPM User's clients, informing of action(s) taken by the CPM User on a device, or of events that occurred on a device.	CPM V2.1
CPM-HLF-034	The CPM Enabler SHALL support CPM User's clients to receive event reporting responses from the network, informing of the results of the requested action(s), if applicable.	CPM V2.1
CPM-HLF-035	The CPM Enabler SHALL support event reporting requests and responses between the network and CPM User's clients, providing complementary information related to the reported event.	CPM V2.1
CPM-HLF-036	The CPM Enabler SHALL support informing the rest of registered CPM User's clients of events requested by one of CPM User's clients, if applicable to that event.	CPM V2.1

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CPM-HLF-037	The CPM Enabler MAY support informing the rest of non-registered CPM User's clients of events requested by one of CPM User's clients, if applicable to that event.	Future

Table 1: High-Level Functional Requirements

6.1.1 Conversation

Label	Description	Enabler Release
	Stand-alone Messaging:	
CPM-CONV-002	The CPM Enabler SHALL handle an incoming CPM Standalone Message that is to be delivered to a CPM User in accordance with user preferences, registration status and/or service provider policies. The following message handling mechanisms are available: • Deliver the CPM Standalone Message to the CPM User's client(s) • Discard the CPM Standalone Message while providing a notification to the sender based on service provider policies and sender's preferences • Defer the CPM Standalone Message • Store the CPM Standalone Message in the network-based storage • Deliver the CPM Standalone Message via a Non-CPM Communication Service, via interworking • Ask the CPM User dynamically which one of the above options should be applied Note: For the last option it could also be that the CPM User's device decides on behalf of the CPM User.	CPM V1.0
CPM-CONV-001	The CPM Enabler SHALL be able to deliver CPM Standalone Messages in immediate mode if the recipient is available and his preferences allow it.	CPM V1.0
CPM-CONV-005	The CPM Enabler SHALL be able to re-direct an incoming CPM Standalone Message to any address based on the user defined preference/settings, Communication Capabilities, and service provider policies, relating to Media Types and/or content adaptation.	CPM V1.0
CPM-CONV-006	The CPM Enabler SHOULD allow CPM User to set preferences for storing the CPM Messages based on the Media forms (e.g. store text and voice messages but delete discrete video and audio).	CPM V1.0
CPM-CONV-009	In case of notification of an available CPM Standalone Message sent to the CPM User's device, the CPM Enabler SHALL allow the CPM User to retrieve all or part of the CPM Standalone Message.	CPM V1.0
CPM-CONV-010	The CPM Enabler SHALL provide mechanisms so that a CPM User can view CPM Messages in the order they are sent by another CPM User.	CPM V1.0
	File Transfers:	
CPM-CONV-044	The CPM Enabler SHALL allow a Principal to propose the initiation of a CPM File Transfer.	CPM V1.0
CPM-CONV-045	The CPM Enabler SHALL allow a Principal to accept or reject a CPM File Transfer prior to the actual transfer of the file(s)	CPM V1.0
CPM-CONV-048	The CPM Enabler SHALL allow either sender or recipient to stop the CPM File Transfer at any time during the transfer.	CPM V2.0
CPM-CONV-049	The CPM Enabler SHALL allow a CPM File Transfer to be initiated by either end point while having an ongoing CPM Session between them.	CPM V2.0
CPM-CONV-050	The CPM Enabler SHALL ensure that the end of a CPM File Transfer SHALL NOT lead to termination of any simultaneous ongoing CPM Session for either Principal.	CPM V2.0
CPM-CONV-051	The CPM Enabler SHALL ensure that the CPM File Transfer invitation includes the file size, file name and type of the file to be transferred.	CPM V2.0

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CPM-CONV-052	The CPM Enabler SHALL allow a service provider to configure a maximum file size allowed for the CPM File Transfer.	CPM V2.0
CPM-CONV-053	The CPM Enabler SHALL allow either sender or recipient to resume an interrupted CPM File Transfer without having to re-send the entire file.	CPM V2.0
CPM-CONV-053a	The CPM Enabler SHALL allow each CPM User recipient of a Group CPM File Transfer to resume the interrupted Group CPM File Transfer without requiring to re-send the entire file from the point at which the interruption was done for that recipient and transparently to the other recipients.	CPM V2.1
CPM-CONV-053b	The CPM Enabler SHALL allow multiple CPM User recipients of a Group CPM File Transfer to resume at the same time the interrupted Group CPM File Transfer, even if the interruption did not occur at the same point for all the CPM User recipients.	Future
CPM-CONV-054	The CPM Enabler SHALL ensure that a CPM File Transfer invitation is sent to all registered devices of the file recipient, and that once the recipient accepts or denies the file transfer request on one of his/her devices, the outstanding invitations are cancelled on his/her other devices.	CPM V2.0
CPM-CONV-054a	After the CPM User has accepted or rejected the request on one CPM Client, the termination of the CPM File Transfer request towards the other connected CPM Clients of the recipients is subject to service provider policies.	CPM V2.1
CPM-CONV-066	The CPM Enabler SHALL support a thumbnail image of the file to be transferred in the CPM File Transfer invitation.	CPM V2.0
CPM-CONV-066a	The CPM Enabler SHALL support optimized CPM File Transfer requests that allow the CPM User to choose to receive or reject the file after previewing the associated thumbnail image of the file.	Future
CPM-CONV-067	The CPM Enabler SHALL store File Transfer file and support later delivery to the CPM User who was invited but either: • temporarily become unavailable or, • has not accepted, subject to service provider policies.	CPM V2.0
	CPM Sessions:	
CPM-CONV-011	The CPM Enabler MAY support allowing/disallowing the sending of particular Media Types (discrete Media, continuous Media, or both) by individual Participants.	CPM V1.0
CPM-CONV-012	The CPM Enabler SHALL allow a Principal to invite another Principal to start or join a CPM Session by sending a CPM Session Invitation, if allowed by service provider policies.	CPM V1.0
CPM-CONV-013	The CPM Enabler SHALL allow a Principal to accept or reject a CPM Session Invitation he/she received (except for the case covered by CPM-CONV-14 below).	CPM V1.0
CPM-CONV-014	The CPM Enabler SHALL be able, where applicable (e.g. not for full-duplex voice) and upon the terminating service provider policies, to accept a CPM Session Invitation without prompting the invited user for confirmation.	CPM V2.0
CPM-CONV-016	The CPM Enabler SHALL be able to associate a validity period with a CPM Session Invitation.	CPM V1.0
CPM-CONV-017	The CPM Enabler SHALL leverage the capabilities (when available) of the underlying IP network to manage validity periods associated with a CPM Session Invitation, including notifying the originating and recipient CPM Users about the outcome of the CPM Session Invitation.	CPM V1.0
CPM-CONV-018	The CPM Enabler SHALL allow CPM User to initiate a CPM Session with selected Media.	CPM V1.0
CPM-CONV-019	The CPM Enabler SHALL allow a CPM User to join or rejoin an ongoing CPM Group Session if the set of CPM Group Membership Rules for the CPM Group are satisfied (e.g. excluding banned users).	CPM V1.0

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CPM-CONV-020	The CPM Enabler SHALL provide a mechanism to invite/remove/ban Participants to/from the ongoing CPM Group Session based on the CPM Group Membership Rules (e.g. limitation to conference initiator only).	CPM V1.0
CPM-CONV-020a	The CPM Enabler SHALL support Group Membership Rules that allow the Participant(s) holding a specific role (e.g. administrator) to remove other Participants in a CPM Group Session.	CPM V2.1
CPM-CONV-021a	The CPM Enabler SHALL provide an Authorized Principal with information about the Participants of a CPM Group Session (e.g., new Participant joins, Participant leaves, list of current Participants, which Participants are blocked by the Authorized Principal, CPM Session ends), when the Authorized Principal is a current Participant.	CPM V1.0
CPM-CONV-022	The CPM Enabler SHALL allow for participation in a CPM Group Session using a Pseudonym depending on the CPM Group and service provider's policy.	CPM V1.0
CPM-CONV-023	The CPM Enabler SHOULD allow a CPM User to negotiate and use a unique Pseudonym when requesting to join anonymously in a CPM Group Session depending on the CPM Group and service provider's policy. For example, the negotiation process may reject forbidden or sensitive words.	CPM V1.0
CPM-CONV-030	The CPM Enabler SHALL allow the CPM User to send a CPM Chat Message during a CPM Session.	CPM V1.0
CPM-CONV-031	The CPM Enabler SHALL allow a CPM User to dynamically add/modify/remove continuous Media during a CPM Session, according to group and service provider policies.	CPM V1.0
CPM-CONV-032	The CPM Enabler SHALL allow the CPM User to accept/reject a request to add/modify/delete continuous Media to a CPM Session received from the other Participant. In case of “accept”, the CPM Session SHALL be modified accordingly. In case of “reject”, the CPM Session SHALL be kept unchanged.	CPM V1.0
CPM-CONV-033	The CPM Enabler SHALL allow the CPM User to accept/reject a request to add/modify/delete continuous Media to a CPM Group Session received from the other Participants. The CPM Session SHALL be modified based on the group and provider’s policies, e.g.: • CPM Session is only modified if all Participants accepted the request (group policy). • CPM Session is only modified to those Participants who accepted the request.	CPM V1.0
CPM-CONV-035	A CPM Enabler MAY allow a CPM User to set a preference for the delivery mechanism in case he is not available (e.g. not registered in the home network) for receiving a CPM Session: • Reject the CPM Session • Establish the CPM Session via a Non-CPM Communication Service, via interworking	CPM V1.0
CPM-CONV-055	The CPM Enabler SHALL provide to the CPM Users “isComposing” notifications within a chat communication, to indicate that a recipient is typing a reply, according to service provider policies and the sender settings.	CPM V2.0
CPM-CONV-056	The CPM Enabler SHALL defer CPM Chat Messages and associated disposition notifications sent to a CPM User, while he/she is not available, according to service provider policies.	CPM V2.0
CPM-CONV-057	The CPM Enabler SHALL NOT store or defer CPM Chat Messages containing “isComposing” notifications.	CPM V2.0

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CPM-CONV-058	The CPM Enabler SHALL defer missed CPM Chat Messages and associated disposition notifications of a CPM Group Session, to which the CPM User was invited but the CPM User has either: – not explicitly joined, or – has joined later, after the CPM Group Session was established, subject to service provider policies.	CPM V2.0
CPM-CONV-059	The CPM Enabler SHALL support CPM Closed Group Session, when initiated by a CPM User, or as determined by service provider policies for CPM Group Sessions with CPM Ad-hoc Group.	CPM V2.0
CPM- CONV-060	The CPM Enabler SHALL reject the request for adding new Participants in a CPM Closed Group Session.	CPM V2.0
CPM- CONV-061	The CPM Enabler SHALL allow the Participant in a CPM Closed Group Session to leave the ongoing session.	CPM V2.0
CPM- CONV-062	In a CPM Closed Group Session, the CPM Enabler SHALL NOT allow a Participant who has explicitly left the CPM Closed Group Session, to rejoin.	CPM V2.0
CPM-CONV-063	The CPM Enabler SHALL allow the current Participants of a CPM Long-lived Session to revive the CPM Group Session after its termination, subject to service provider policies.	CPM V2.0
CPM- CONV-064	The CPM Long-lived Session that is also CPM Closed Group Session SHALL maintain the same type of CPM Group Session upon revival (i.e. it is restarted as a CPM Closed Group session).	CPM V2.0
CPM-CONV-065	Once a CPM Participant has chosen to leave a CPM Long-lived Session, the CPM Enabler SHALL allow him/her to re-join it, if: – the CPM Long-lived Session is not a CPM Closed Group Session and, – the initial CPM Long-lived Session is still active, or the CPM Long-lived Session was restarted and, – one of the Participants has added the CPM participant that has left.	CPM V2.0
CPM-CONV-068	The CPM Enabler SHALL allow CPM Participants of a CPM Group Session (including Long-lived CPM Group Sessions) to add, modify and delete the "subject" of the CPM Group Session at any given time.	CPM V2.1
CPM-CONV-068a	The subject change SHALL be visible for all CPM Participants on all their devices (in case of offline devices the change SHALL be visible once these devices go online again) once this change is authorized by the network controlling the CPM Group Session.	CPM V2.1
CPM-CONV-068b	The conversation history SHALL record the identity of the Participant that initiated the change of the "subject" of the CPM Group Session and the time of the change of the "subject" to allow display of events in chronological order.	CPM V2.1
CPM-CONV-068c	The CPM Enabler MAY support a policy that only the group administrator of the CPM Group Session can add, modify and delete the "subject" of the CPM Group Session at any given time. This policy only applies when the CPM Group Membership Rules that distinguish group administrator from other Group members applies. The control of the policy is based on the service provider's policy.	CPM V2.2
CPM-CONV-069	The CPM Enabler SHALL allow CPM Participants of a CPM Group Session (including Long-lived CPM Group Sessions) to add, modify and delete the "icon" of the CPM Group Session at any given time.	CPM V2.1
CPM-CONV-069a	The "icon" change SHALL be visible for all CPM Participants on all their devices (in case of offline devices the change SHALL be visible once these devices go online again) once this change is authorized by the network controlling the CPM Group Session.	CPM V2.1

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CPM-CONV-069b	The conversation history SHALL record the identity of the Participant that initiated the change of the "icon" of the CPM Group Session and the time of the change of the "icon" to allow display of events in chronological order.	CPM V2.1
CPM-CONV-070	The CPM Enabler MAY support a mechanism to remove a CPM User from all CPM Sessions in which he/she is a Participant: – from all active CPM Sessions, and – from all inactive CPM Long-lived Group Sessions.	CPM V2.1
CPM-CONV-072	The CPM Enabler SHALL allow the Group administrator of a CPM Group Session (including Long-lived CPM Group Sessions) to transfer administrator role to a specified member in the CPM Group Session at any given time if the CPM Group Membership Rules distinguish Group Administrator from other Group members.	CPM V2.2
CPM-CONV-072a	The change of the Group administrator SHALL be visible for all CPM Participants on all their devices (in case of offline devices the change SHALL be visible once these devices go online again) once this change is authorized by the network controlling the CPM Group Session.	CPM V2.2
CPM-CONV-073	The CPM Enabler SHALL support the mechanism in the group conversation to allow the participant in the CPM Group Session to denote his/her message to specified Participant(s) in the CPM Group (e.g., @somebody in the Group).	CPM V2.2
CPM-CONV-073a	The CPM Enabler SHALL transmit the message and the indication to all CPM Participants in the CPM Group on all their devices.	CPM V2.2
	CPM Conversation (general)	
CPM-CONV-037	The CPM Enabler SHALL allow a CPM User to initiate CPM Conversations independently of the status and availability of the user's Presence Information.	CPM V1.0
CPM-CONV-038	The CPM Enabler SHALL support 1-1 and 1-N CPM Conversations.	CPM V1.0
CPM-CONV-039	The CPM Enabler SHALL allow the CPM User to handle several CPM Conversations in parallel according to Communication Capabilities and service provider policies.	CPM V1.0
CPM-CONV-040	The CPM Enabler SHALL provide the means to recognize CPM Standalone Messages, CPM File Transfers and CPM Sessions as part of a CPM Conversation.	CPM V1.0
CPM-CONV-041	The CPM Enabler SHOULD allow the presentation of CPM Standalone Messages, CPM File Transfers and CPM Sessions belonging to the same CPM Conversation in a conversational view in the CPM-enabled device according to the user's preferences.	CPM V1.0
CPM-CONV-042	The CPM Enabler SHALL provide for the storage of the CPM Standalone Messages, CPM File Transfers and CPM Sessions belonging to the same CPM Conversation into a CPM Conversation History on behalf of a Participant, limited to those elements associated with the CPM Conversation sent or received by that Participant.	CPM V1.0
CPM-CONV-043	The CPM Enabler SHOULD be able to present the stored CPM Standalone Messages, CPM File Transfers and CPM Session Histories belonging to a CPM Conversation History in a threaded view according to the user's preferences. NOTE: This is the storage representation of the concept defined in CPM-CONV-041.	CPM V1.0

Table 2: High-Level Functional Requirements – Conversation Items

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6.1.2 Management of Deferred CPM Messages

Label	Description	Enabler Release
CPM-DEF-004	The CPM Enabler SHALL handle deferred CPM Messages according to service provider policies, registration status and the recipient's preferences.	CPM V2.0
CPM-DEF-005	A Deferred CPM Standalone Message SHALL either be automatically delivered when the CPM User becomes available, or the CPM User SHALL be notified for possible retrieval by the CPM User.	CPM V1.0
CPM-DEF-005a	Deferred CPM Chat Messages SHALL be automatically delivered when the CPM User becomes available.	CPM V2.0
CPM-DEF-001	The CPM Enabler MAY allow the originating user to associate an expiry time to a CPM Standalone Message.	CPM V1.0
CPM-DEF-002	The CPM Enabler SHALL allow the service provider to override the expiry time associated with a CPM Standalone Message, set by the originating user (e.g. reduce to a shorter time).	CPM V1.0
CPM-DEF-003a	When the expiry time associated with a Deferred CPM Standalone Message is reached the CPM Enabler SHALL take one of the following actions according to user preferences and/or service provider's policy: • Discard the CPM Standalone Message • Store the CPM Standalone Message in the network-based storage	CPM V1.0

Table 3: High-Level Functional Requirements – Management of Deferred CPM Messages Items

6.1.3 CPM Group Handling

Label	Description	Enabler Release
CPM-GRP-001	The CPM Enabler SHOULD allow an Authorized Principal to set or update values for parameters like group information and the CPM Group Membership Rules for a CPM Pre-defined Group.	CPM V1.0
CPM-GRP-002	The CPM Enabler SHALL apply the set of CPM Group Membership Rules (if any) to a CPM Group Session.	CPM V1.0
CPM-GRP-004	The CPM Enabler MAY allow an Authorized Principal to view all or a subset of the CPM Group information (e.g. CPM Group Membership Rules, list of Participants, etc.) based on service provider policies.	CPM V1.0
CPM-GRP-008	The CPM Enabler MAY provide a mechanism to send information about a CPM Pre-defined Group to CPM Group members, e.g. for purposes to advertise a newly created group.	CPM V1.0

Table 4: High-Level Functional Requirements – CPM Group Handling Items

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6.1.4 Media Support

Label	Description	Enabler Release
CPM-MED-001	The CPM Enabler SHALL support discrete Media of at least the following kinds: • Text • Images • Binary files • Audio • Video	CPM V1.0
CPM-MED-002	The CPM Enabler SHALL allow the sender of a CPM Message to indicate that a piece of discrete Media (e.g. audio clip or video clip) sent as part of the CPM Message is to be played immediately and automatically upon reception at the recipient end, if supported and enabled by the recipient user.	CPM V1.0
CPM-MED-003	The CPM Enabler SHALL allow an inviting CPM User to indicate a set of offered Media Types at the start of a CPM Session based on the Communication Capabilities of his/her device, user preferences, and service provider policies.	CPM V1.0
CPM-MED-005	The CPM Enabler SHALL support negotiation of Media Types.	CPM V1.0
CPM-MED-007	The CPM Enabler SHALL support the simultaneous exchange of multiple continuous Media and/or CPM Chat Messages in the same CPM Session.	CPM V1.0

Table 5: High-Level Functional Requirements – Media Support Items

6.1.5 Network-based Storage

Label	Description	Enabler Release
CPM-STOR-001	The CPM Enabler SHALL allow CPM User to delete a stored CPM Message, CPM File Transfer History, CPM Session History, CPM Conversation History or Media locally on one of his registered devices and keep the stored item in the network-based storage for later retrieval.	CPM V1.0
CPM-STOR-003	The CPM Enabler SHALL be able to store • CPM Messages and corresponding disposition notifications • CPM File Transfers as CPM File Transfer Histories • CPM Sessions as CPM Session Histories • CPM Conversations as CPM Conversation Histories • Media in the user's network-based storage according to the user's preferences and/or service provider's policy.	CPM V1.0
	Storage of non-CPM objects	
CPM-STOR-003a	The CPM Enabler SHOULD be able to store non-CPM objects in the user's network-based storage.	CPM V2.1
CPM-STOR-004	The CPM Enabler SHALL allow the CPM User to set preferences (e.g. enable/disable, filtering criteria) whether to automatically store CPM Messages, CPM File Transfers, CPM Sessions, CPM Conversations and Media (e.g., when CPM Messages are received and sent) in his/her network-based storage.	CPM V1.0
CPM-STOR-005	The CPM Enabler SHALL allow the CPM User to manually store CPM Messages, CPM File Transfers, CPM Sessions, CPM Conversations and Media from a CPM-enabled device to his/her network-based storage.	CPM V1.0
CPM-STOR-007	The CPM Enabler SHALL allow an Authorized Principal to use Media independently of the CPM Messages, CPM File Transfers or CPM Session Histories they were attached to.	CPM V1.0

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CPM-STOR-008	The CPM Enabler SHALL support access (select, view, retrieve, etc.) to all • CPM Messages • CPM File Transfers as CPM File Transfer Histories • CPM Sessions as CPM Session Histories • CPM Conversations as CPM Conversation Histories • Media stored in the user's network-based storage from any of the user's capable devices.	CPM V1.0
CPM-STOR-008a	The CPM Enablers SHOULD support access (select, view, retrieve, etc.) to all voicemail messages stored in the user's network-based storage.	CPM V2.1
CPM-STOR-009	The CPM Enabler SHALL, according to the user's preferences (e.g. filtering criteria, enable/disable automatic synchronization) and/or the service provider's policy, support the synchronization of : • the stored CPM Messages, CPM File Transfer Histories or CPM Session Histories • the CPM Conversation Histories • the Media • the list of stored CPM Messages, CPM File Transfer Histories and/or CPM Session Histories and/or Media between the local storage of the CPM User's device(s) and CPM User's network-based storage.	CPM V1.0
CPM-STOR-010	The CPM Enabler SHALL allow the CPM User to forward CPM Messages, CPM File Transfer Histories and CPM Session Histories stored in his/her network-based storage (without downloading them to his/her device).	CPM V1.0
CPM-STOR-011	The CPM Enabler SHALL allow the CPM User to download all or part of a CPM Message that is stored in his network-based storage to his/her device.	CPM V1.0
CPM-STOR-012	The CPM Enabler SHALL allow the CPM User to download Media that is stored in his network-based storage to his/her device.	CPM V1.0
CPM-STOR-013	The CPM Enabler SHALL allow the CPM User to download a preview (e.g. a thumbnail) of Media stored in his network-based storage.	CPM V1.0
CPM-STOR-014	The CPM Enabler SHALL allow the management (e.g. creation, renaming, deletion, moving, copying) of folders in a CPM User's network-based storage by an Authorized Principal.	CPM V1.0
CPM-STOR-015	The CPM Enabler SHALL allow an Authorized Principal to • move between folders • add to folders • copy between/within folders • delete • rename • list with a filter based on some specific criteria (e.g. recipient, originator, date, stored in a specific folder…) the following items residing in a CPM User's network-based storage: • CPM Conversation Histories • stored CPM Messages • CPM File Transfer Histories • CPM Session Histories • Media	CPM V1.0
CPM-STOR-015a	The CPM Enabler SHOULD specify folder structure dedicated to storing voicemail related media objects (e.g. messages, greetings, global voicemail settings).	CPM V2.1

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CPM-STOR-016	The CPM Enabler SHALL allow the CPM User to select: • stored CPM Messages, stored CPM File Transfer Histories or CPM Session Histories, and/or • CPM Conversation Histories • Media from his network-based storage (without downloading them to his device) and/or from his device's storage and add them to a CPM Message. When the CPM User subsequently requests for the CPM Message to be sent, the CPM Enabler SHALL be able incorporate into the CPM Message, the selected data from the CPM User's network-based storage (without downloading them to the sender's CPM User's device), according to user's preferences and/or service provider's policy.	CPM V1.0
CPM-STOR-017	The CPM Enabler SHALL be able to store incoming CPM Messages and attached Media in the network-based storage, and allow the CPM User to receive CPM Messages without the Media by including a link to access this Media in the network-based storage, based on user's preferences and service provider's policies.	CPM V1.0
CPM-STOR-018	The CPM Enabler SHOULD support a search function to allow an Authorized Principal to search in an efficient manner in the network-based storage for Media, stored CPM Messages, CPM Session Histories or CPM Conversation Histories residing in storage space to which he has permission for access.	CPM V1.0
CPM-STOR-019	The CPM Enabler SHALL allow an Authorized Principal to give permission to • A limited set of Principals • To everybody to access specific items (Media, CPM Conversation Histories, CPM Messages, CPM File Transfer Histories and CPM Session Histories), or to access and/or write in folders in his/her network-based storage.	CPM V1.0
CPM-STOR-021	The CPM Enabler SHALL allow an Authorized Principal to modify or revoke the permissions associated with specific items (Media, CPM Conversation Histories, CPM Messages, CPM File Transfer Histories, CPM Session Histories, folders) in his/her network-based storage.	CPM V1.0
CPM-STOR-026	The CPM Enabler SHALL allow an Authorized Principal to access specific items (Media, CPM Conversation Histories, CPM Messages, CPM File Transfer Histories, CPM Session Histories) and folders (including the items stored therein) in another user's network-based storage for which the Principal has access permission.	CPM V1.0
CPM-STOR-027	The CPM Enabler SHALL allow an Authorized Principal to upload specific items (Media, CPM Conversation Histories, CPM Messages, CPM File Transfer Histories, CPM Session Histories) to folders in a CPM User's network-based storage for which the Principal has write permission.	CPM V1.0
CPM-STOR-033	The CPM Enabler SHALL support real-time storing of CPM Chat Messages (as they are sent and received), subject to service provider policies.	CPM V2.0
External entities reusing the Message Store		
CPM-STOR-034	The CPM Enabler SHOULD allow an external entity to have read/write access to the Message Store.	CPM V2.1

Table 6: High-Level Functional Requirements – Network-based Storage Items

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6.1.6 Multi-device Environment

Label	Description	Enabler Release
CPM-MLD-001	The CPM Enabler SHALL be able to deliver either the entire CPM Standalone Message or a notification of an available CPM Standalone Message to all or a subset of the devices of the CPM User based on message characteristics, Communication Capabilities, user preferences and/or service provider's policy.	CPM V1.0
CPM-MLD-003a	The CPM Enabler SHALL send a delivery notification and/or a read report to the device of the CPM User that originated the CPM Standalone Message that asked for the delivery notification and/or read report.	CPM V2.0
CPM-MLD-003b	The CPM Enabler SHALL send delivery notification and/or read reports to all or a subset of the other devices of the CPM User dependent upon the user preferences and/or service provider's policy.	CPM V1.0
CPM-MLD-004	A CPM User that requested to be notified of the delivery of a CPM Message he/she sent to a recipient having multiple devices SHALL receive exactly one delivery notification after the CPM Message has been delivered to at least one of the devices of the recipient.	CPM V1.0
CPM-MLD-005	A CPM User that requested a read report for a CPM Standalone Message he/she sent to a recipient having multiple devices SHALL receive exactly one read report after the CPM Standalone Message has been read on at least one of the devices of the recipient.	CPM V1.0
CPM-MLD-019	The CPM Enabler SHALL be able to deliver a CPM File Transfer request to all or a subset of the devices of the CPM User dependent upon the user's preferences, device capabilities and/or service provider's policy.	CPM V1.0
CPM-MLD-020	When the CPM User has accepted the CPM File Transfer on one of his/her devices, the outstanding CPM File Transfer requests on the other devices MAY be cancelled, based on operator policy.	CPM V1.0
CPM-MLD-020a	The CPM Enabler MAY support delivery of CPM File Transfer files to all CPM User's devices on which the CPM User has accepted the CPM File Transfer request.	CPM V2.1
CPM-MLD-006	The CPM Enabler SHALL be able to deliver a CPM Session Invitation to all or a subset of the devices of the CPM User dependent upon the user's preferences, device capabilities and/or service provider's policy.	CPM V1.0
CPM-MLD-007a	When the CPM User has accepted the CPM Session Invitation on one of his/her devices, the outstanding CPM Session Invitations on the other devices MAY be cancelled, based on operator policy.	CPM V1.0
CPM-MLD-007b	The CPM Enabler MAY support all CPM User's devices on which the CPM User has accepted the CPM Session Invitation for a chat to participate in the CPM Session (i.e. sending and receiving chat messages) and maintain the same conversation view across all participating devices.	CPM V2.1
CPM-MLD-008a	When the CPM User has rejected the CPM Session Invitation on one of his/her devices, the outstanding CPM Session Invitations on the other devices SHALL be cancelled.	CPM V1.0
CPM-MLD-026	If the auto-answer configuration is used for CPM Sessions, the CPM Enabler SHALL keep the CPM Session only on the recipient CPM User device which is used to respond to the chat invitation, and close the CPM Session with all remaining CPM User devices.	CPM V2.0
CPM-MLD-011	The CPM Enabler SHALL allow the CPM User to use multiple devices for a single CPM Conversation.	CPM V1.0
CPM-MLD-015	The CPM Enabler SHALL provide the CPM User with a mechanism to define an identifier (i.e. a human readable name) for each of his/her devices.	CPM V1.0

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CPM-MLD-016	The CPM Enabler SHALL keep all CPM Conversation Histories, a subset of the CPM Conversation Histories, or a subset of stored CPM Messages / CPM File Transfer Histories / CPM Session Histories, the whole folder hierarchy (where CPM Messages, CPM File Transfer Histories, CPM Session Histories and/or CPM Conversation Histories are stored) or a subset of the folder hierarchy up-to-date on all of the end-user's devices, irrespective of on which device these messages are created (e.g. drafts) and/or received, depending on service provider's policy and/or end-user preferences and filtering-rules.	CPM V1.0
CPM-MLD-017	The CPM Enabler SHALL keep all stored CPM Messages-states (e.g. "read-indications", "reply-indications", "delivery notifications", "read reports", etc) up-to-date on all of the end-user's devices, irrespective of on which device changes to these CPM Messages-states occur, depending on service provider's policy and/or end-user preferences and filtering-rules.	CPM V1.0
CPM-MLD-018	The CPM Enabler SHALL allow a CPM User to have a single CPM Address concurrently associated with multiple CPM-enabled devices according to service provider's policy.	CPM V1.0
CPM-MLD-022	The CPM Enabler SHALL send a delivery notification to the device of the CPM Session User that originated the CPM Chat Message and requested the delivery notification.	CPM V2.0
CPM-MLD-023	When the original sender has multiple devices, the CPM Enabler SHALL send the read reports only to the device that sent the original CPM Chat Message requesting the read report, subject to recipient's privacy settings.	CPM V2.0
CPM-MLD-024	A CPM User that requested a delivery notification of a CPM Chat Message sent to a recipient having multiple devices SHALL receive exactly one delivery notification after the CPM Chat Message has been delivered to the recipient device that participated in the CPM Group Session.	CPM V2.0
CPM-MLD-025	A CPM User that requested a read report for a CPM Chat Message sent to a recipient having multiple devices SHALL receive exactly one read report after the CPM Chat Message has been displayed on the recipient device that participated in the CPM Group Session.	CPM V2.0
	Primary and Secondary devices	
CPM-MLD-027	The CPM Enabler SHOULD support a CPM User access to the CPM features via multiple devices: one Primary Device and multiple Secondary Devices, subject to service provider policies.	CPM V2.1
CPM-MLD-028	The CPM Enabler SHALL support, subject to service provider policies, immediate delivery to the CPM User's Primary Device without IP access available, for: – a CPM Standalone Message, – a CPM Chat Message or, – a CPM File Transfer, even if the CPM request was delivered also to at least one Secondary Device.	CPM V2.1
CPM-MLD-028a	The CPM Enabler SHALL support, subject to service provider policies, immediate delivery to a CPM User's Primary Device without an available IP access, via SMS interworking, if applicable to the type of content (e.g. text) in the CPM request.	CPM V2.1
CPM-MLD-029	The CPM Enabler SHALL send an Undelivered Content Notification to the recipient CPM User on her/his Primary Device when content that was sent to her/him (e.g. media content or non-text) could not be delivered due to lack of IP connectivity of the CPM User Primary Device, subject to service provider policies.	Future
CPM-MLD-030	The CPM Enabler SHALL generate a delivery report towards the sender when an Undelivered Content Notification was successfully sent to a Primary Device of a CPM User, if a delivery report has not already been sent by a Secondary Device of the CPM User.	Future

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CPM-MLD-031	The CPM Enabler SHALL populate in the Undelivered Content Notification an operator-configurable text message informing the CPM User on the Primary Device that he/she received content that cannot be delivered due to lack of IP connectivity.	Future
CPM-MLD-032	The CPM Client on a Primary Device that has received an Undelivered Content Notification about undeliverable content SHALL synchronize with the CPM Message Store as soon as IP connectivity is restored.	Future
CPM-MLD-033	The CPM Enabler MAY populate in the Undelivered Content Notification the URL reference to the original content.	Future
CPM-MLD-034	The CPM Client on a Primary Device SHALL discard and replace the associated Undelivered Content Notification with the original message or content, after it has obtained it.	Future
CPM-MLD-035	The CPM Enabler SHALL obtain information on CPM User's Primary Device access technology in order to determine how to best deliver CPM requests to the CPM User: – via CPM technology if IP connectivity (preferred*), or – via interworking to legacy non-CPM technology (e.g. legacy SMS), whichever access becomes available to the CPM User's Primary Device. *NOTE: in case the device gets connectivity after e.g. airplane mode, it may first get CS cellular access and then IP access. The CPM Client SHOULD wait to determine if IP access is also available in addition to CS cellular, and give precedence to CPM technology via the IP connection.	CPM V2.1
CPM-MLD-036	The CPM Enabler SHALL be able to notify one or more of the CPM User's Client(s) that they need to initiate synchronization with the CPM Message Store, due to events that have occurred in the CPM Message Store.	Future
CPM User Activity		
CPM-MLD-037	The CPM Enabler SHOULD support a mechanism for a CPM Client to communicate CPM User Activity to the CPM network, subject to service provider policies. Note: How the CPM Client determines CPM User Activity is out of scope of this specification.	CPM V2.1
CPM-MLD-037a	The CPM Enabler SHOULD support indicating the CPM User Activity to the CPM network at the time of the delivery of a CPM Message or CPM File Transfer to any of CPM User's Clients, subject to service provider policies.	CPM V2.1
CPM-MLD-038	The CPM Enabler SHOULD be able to determine when a CPM User explicitly leaves a CPM Session. Note: In a multi-device scenario, none of CPM User's Clients SHALL stay connected in that CPM Session.	CPM V2.1
CPM-MLD-038a	The CPM Enabler SHOULD be able to determine when a CPM User's Client leaves a CPM Session due to CPM User's inactivity on that CPM Client.	Future

Table 7: High-Level Functional Requirements – Multi-devices Environment Items

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6.1.7 Support of Multiple CPM Addresses

Label	Description	Enabler Release
CPM-MAD-001	The CPM Enabler SHALL allow a CPM User to bind several CPM Addresses to a single CPM-enabled device according to service provider's policy.	CPM V1.0
CPM-MAD-005	The CPM Enabler SHALL support replying to CPM Messages by using the CPM Address that the original CPM Message was received on.	CPM V1.0

Table 8: High-Level Functional Requirements – Multiple CPM Addresses Items

6.1.8 Lawful Interception

NOTE: The capability to intercept CPM telecommunications traffic and related information is always implemented in accordance with national or regional (e.g. European Union) laws or technical regulations applicable to the service provider. Nothing in this specification, including the definitions, is intended to supplant such applicable laws or regulations.

Label	Description	Enabler Release
CPM-LI-001	The CPM Enabler SHALL support capabilities to allow lawful interception.	CPM V1.0
CPM-LI-002	Available and applicable underlying network (e.g., SIP/IP Core) capabilities SHOULD be used to support lawful interception requirements as much as possible (e.g. use 3GPP lawful interception in case of 3GPP IMS and/or other national or regional technical specifications).	CPM V1.0

Table 9: High-Level Functional Requirements – Lawful Interception Items

6.1.9 Interworking

Label	Description	Enabler Release
CPM-IWF-001	The CPM Enabler SHALL support interworking with Non-CPM Communication Services without requiring changes to them.	CPM V1.0
CPM-IWF-002	The CPM Enabler SHALL allow a CPM User to send a CPM Message from a CPM-enabled device to a non-CPM User.	CPM V1.0
CPM-IWF-003	The CPM Enabler SHALL allow a CPM User to receive a message from a non-CPM User.	CPM V1.0
CPM-IWF-004	The CPM Enabler SHALL be able to send messages using an appropriate non-CPM communication technology in case that the intended recipient is not a CPM User or is not available for receiving CPM Messages.	CPM V1.0
CPM-IWF-005	The CPM Enabler SHALL allow a CPM User to attempt to send a continuous Media from a CPM-enabled device to a non-CPM User or to a CPM User who is not available for receiving continuous Media. If the continuous Media cannot be sent, the sender SHALL be notified.	CPM V1.0
CPM-IWF-006	The CPM Enabler SHALL allow a CPM User to receive a continuous Media to a CPM-enabled device from a non-CPM User.	CPM V1.0
CPM-IWF-020	The CPM Enabler SHALL allow a CPM User to perform a CPM File Transfer from a CPM-enabled device to a non-CPM User.	CPM V1.0
CPM-IWF-021	The CPM Enabler SHALL be able to convert a CPM File Transfer towards the appropriate format for the target Non-CPM Communication Service, and accept a response to that file transfer while performing interworking towards a Non-CPM Communication Service that does support file transfer.	CPM V1.0
CPM-IWF-022	When interworking towards a Non-CPM Communication Service that does not support file transfer, depending on user preferences and service provider policies, the CPM Enabler SHALL be able to: • Accept the CPM File Transfer on behalf of a non-CPM User and convert the transferred file into a message. • Reject the CPM File Transfer	CPM V1.0

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CPM-IWF-007	The CPM Enabler SHALL be able to convert a CPM Session Invitation towards the appropriate format for the target messaging service, and accept a response to that converted invitation while performing interworking towards a Non-CPM Communication Service that does support sessions and invitations.	CPM V1.0
CPM-IWF-008	When interworking towards a Non-CPM Communication Service that does not support sessions or invitations, depending on user preferences and service provider policies, the CPM Enabler SHALL be able to: • Accept a CPM Session Invitation on behalf of a non-CPM User • Reject the CPM Session Invitation • Convert a CPM Session Invitation towards an inviting message, and accept a response from the non-CPM User to the inviting message	CPM V1.0
CPM-IWF-009	The CPM Enabler SHALL be able to convey to a CPM User an invitation request from a Non-CPM Communication Service, and convey the corresponding invitation response back to the non-CPM user.	CPM V1.0
CPM-IWF-010	When a CPM User exchanges messages with a non-CPM User, the CPM Enabler SHOULD be able to identify CPM Messages associated with a CPM Conversation so that they can be displayed in a conversational view in the CPM User's device if required by the CPM User's preferences.	CPM V1.0
CPM-IWF-011	The CPM Enabler SHOULD be able to provide the necessary information to Non-CPM Communication Services so that a Non-CPM Communication Service user can view messages in the order they are sent by the CPM User.	CPM V1.0
CPM-IWF-012	The CPM Enabler SHOULD be able to use any information provided and supported by a Non-CPM Communication Service to ensure that a CPM User can view messages in the order they are sent by the non-CPM User.	CPM V1.0
CPM-IWF-016	The CPM Enabler SHALL preserve the request of an originator to not disclose its identity while interworking with a Non-CPM Communication Service.	CPM V1.0
CPM-IWF-017	The CPM Enabler SHALL refrain from interworking with a Non-CPM Communication Service when the originator requested to not disclose its identity and the interworking cannot guarantee this.	CPM V1.0
CPM-IWF-018	The CPM Enabler SHOULD preserve sensitivity indications when interworking.	CPM V1.0
CPM-IWF-019	The CPM Enabler SHOULD preserve priority indications when interworking.	CPM V1.0
CPM-IWF-023	The CPM Enabler SHALL support interworking with SIMPLE IM V2.0 for the CPM Conversations, according to service provider policies.	CPM V2.0
CPM-IWF-024	The CPM Enabler SHALL support interworking of the disposition notifications of the CPM Session with SIMPLE IM v2.0 Enabler, for a seamless delivery to the CPM and SIMPLE IM v2.0 Users, according to service provider policies.	CPM V2.0
CPM-IWF-025	The CPM Enabler SHALL support interworking of the disposition notifications of the CPM Session with SMS and MMS according to service provider policies.	CPM V2.0
CPM-IWF-026	When a Long-lived CPM Group Session is re-started, the CPM Enabler SHALL consistently use the same interworking information associated with the Long-lived CPM Group Session towards a participant CPM User's Non-CPM Communication Service or to a non-CPM participant.	CPM V2.1
CPM-IWF-027	When a Long-lived CPM Group Session is idle, the CPM Enabler SHALL allow a non-CPM User participant to re-start it.	Future
CPM-IWF-028	When a CPM Message is delivered via both CPM and non-CPM communication technologies to devices of the CPM User, the CPM Enabler SHALL ensure that each delivered message is only stored once in the network-based storage.	CPM V2.1

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CPM-IWF-029	The CPM Enabler SHALL provide the interworking information needed (e.g. the non-CPM technology used, correlation data) to support correlation of message objects stored in the CPM Message Store with the messages interworked to non-CPM technologies.	CPM V2.1

Table 10: High-Level Functional Requirements – Interworking Items

6.1.10 Security

Label	Description	Enabler Release
CPM-SEC-001	The CPM Enabler SHALL provide a Principal with at least the same security level as is provided with the existing messaging services (e.g. SMS, MMS, SIMPLE IM, PoC, VoIP).	CPM V1.0
CPM-SEC-005	Unauthorized Principals SHALL be denied access to the functions of the CPM Enabler.	CPM V1.0
CPM-SEC-006	It SHALL be possible to preserve the integrity and confidentiality of communication between a CPM Client and CPM network based functionality.	CPM V1.0
CPM-SEC-007	The CPM Enabler SHALL NOT enable the circumvention of applicable DRM mechanisms (e.g. when a user gives permission to access Media in his/her network-based storage).	CPM V1.0

Table 11: High-Level Functional Requirements – Security Items

6.1.10.1 Authentication

Label	Description	Enabler Release
CPM-AUC-001	A CPM Enabler SHALL support a Principal to be authenticated by the CPM service provider domain.	CPM V1.0
CPM-AUC-002	The CPM Enabler SHALL support a Principal to authenticate the CPM service provider domain.	CPM V1.0
CPM-AUC-003	The CPM Enabler MAY leverage the authentication capabilities of the underlying IP network to authenticate a Principal.	CPM V1.0
CPM-AUC-004	The CPM Enabler MAY leverage the authentication capabilities of the underlying IP network to allow a Principal to authenticate the service provider domain.	CPM V1.0

Table 12: High-Level Functional Requirements – Authentication Items

6.1.10.2 Authorization

Label	Description	Enabler Release
CPM-AUT-001	The CPM Enabler SHALL verify, if applicable by the service provider's policy, whether a Principal is authorized to perform the action(s) it requested.	CPM V1.0

Table 13: High-Level Functional Requirements – Authorization Items

6.1.10.3 Data Integrity

None.

6.1.10.4 Confidentiality

None.

6.1.11 Administration and Configuration

None.

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6.1.12 Usability

Label	Description	Enabler Release
CPM-USA-010	A CPM User SHALL be able to define a display name for himself.	CPM V1.0
CPM-USA-011	The CPM Enabler SHALL convey an originator's display name to the target user(s).	CPM V1.0
CPM-USA-001	The CPM Enabler SHALL be able to present to the recipient CPM User, the display name of the sender as in the recipient's address book, or a combination of the display name and other information (e.g. company name) from the recipient's address book, instead of the display name included in the originating address information. Note: if the sender has requested not to disclose his identity then this requirement does not apply.	CPM V1.0
CPM-USA-002	The CPM Enabler SHALL allow the CPM User to initiate communication using URI Schemes contained in CPM Messages.	CPM V1.0
CPM-USA-003	The CPM Enabler SHALL allow a CPM User to switch on/off notifications, subject to service provider's policy on which notifications can be switched on/off by this feature.	CPM V1.0
CPM-USA-004	The CPM Enabler SHALL ensure that a CPM User does not have to know or select the communication technology that will be used for sending a CPM Message to a non-CPM User.	CPM V1.0
CPM-USA-005	The CPM Enabler SHALL ensure that a CPM User does not have to know or select the communication technology that will be used for sending a continuous Media to a non-CPM User.	CPM V1.0
CPM-USA-009	The CPM Enabler SHALL ensure that a CPM User does not have to know or select the communication technology that will be used for a CPM File Transfer.	CPM V1.0
CPM-USA-006	The CPM Enabler SHALL ensure that a CPM User does not have to know or select the communication technology that will be used for sending a CPM Session Invitation to a non-CPM User.	CPM V1.0
CPM-USA-007	The CPM Enabler SHALL ensure that a CPM User does not have to know the communication technology used by the non-CPM User to send an invitation request.	CPM V1.0
CPM-USA-008	A CPM User SHALL be able to initiate CPM Conversations using his/her address book with selected contacts.	CPM V1.0
CPM-USA-012	To avoid presenting duplicate messages to the CPM User, the CPM Enabler SHALL support the CPM User's devices to correlate message duplicates, in case different technologies were used to deliver that message to the devices of the CPM User. Note: In some scenarios, a CPM Message can be delivered as CPM Standalone Message to a tablet and be interworked as SMS to a mobile device. When stored in the CPM Message Store, the message is stored as e.g. standalone message, so when the mobile device synchronizes with the CPM Message Store it should be able to identify that it's the same message as the SMS and only show it to the user once.	CPM V2.1

Table 14: High-Level Functional Requirements – Usability Items

6.1.13 Interoperability

Label	Description	Enabler Release
CPM-IOP-001	The CPM Enabler SHALL support CPM Conversations between Principals from different CPM service providers.	CPM V1.0

Table 15: High-Level Functional Requirements – Interoperability Items

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6.1.14 Privacy

None.

6.1.15 Service Enablement

Label	Description	Enabler Release
CPM-SVE-001	The CPM Enabler SHOULD support using CPM as a transport to direct CPM User requests to an appropriate application.	CPM V2.1
CPM-SVE-002	When using CPM as a transport enabler, the CPM Enabler SHALL distinguish CPM User requests directed to the application.	CPM V2.1
CPM-SVE-003	When using CPM as a transport enabler, the CPM Enabler SHALL support different handling of CPM User requests directed to an application, than the normal CPM requests. The different behaviour includes prohibiting some of the CPM features (e.g. interworking, deferral, storing in CPM Message Store), subject to service provider policies.	CPM V2.1

Table 16: High-Level Functional Requirements – Service Enablement Items

6.1.16 Charging

Label	Description	Enabler Release
CPM-CHG-001	The CPM Enabler SHOULD support the Charging Events for Online Charging.	CPM V2.2
CPM-CHG-002	The CPM Enabler SHOULD support the Charging Events for Offline Charging.	CPM V2.2
CPM-CHG-003	If supported, the CPM Enabler SHALL generate Charging Events for the following CPM events: • CPM Standalone Message • CPM File Transfer • CPM Chat Message for 1-1 Chat • CPM Chat Message in a CPM Group Session • System Events (e.g. Group Session Management, Participant Information) • Disposition Notifications • is Composing	CPM V2.2

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CPM-CHG-004	If supported, the Charging Event SHALL contain at least the following information elements as applicable: • authenticated originator address • target destination address • additional destination addresses • unique message identifier within the conversation • date and time of the Charging Event • message direction (originating or terminating) • identification of the originating or terminating service provider • identification of transit carriers • identification of the CPM service • size of the CPM Message or CPM File Transfer Payload • CPM Message or CPM File Transfer Content-Type • Payload-Type(s) included in multi-part payloads; • CPM Group Session Identity • request result and reason • application specific information	CPM V2.2

Table 17: High-Level Functional Requirements – Charging

6.2 Overall System Requirements

Label	Description	Enabler Release
CPM-OSR-001	Recognizing the existence of current standards-based communication services (messaging, telephony, etc), the CPM Enabler SHOULD re-use as appropriate (e.g. through reference) relevant parts of the associated supporting specifications from OMA, 3GPP, 3GPP2, IETF, TISPAN, etc.	CPM V1.0

Table 18: Overall System Requirements

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Appendix A. Change History (Informative)

A.1 Approved Version History

Reference	Date	Description
n/a	n/a	No previous version within OMA

A.2 Draft/Candidate Version 2.2 History

Document Identifier	Date	Sections	Description
Draft Versions OMA-RD-CPM-V2_2	06 Jul 2016	all	First baseline draft for CPM V2.2 based on the above Candidate version for CPM V2.1, and incorporated content of INP#CPM-2016-048.
	19 Aug 2016	6.1.1 B.1	Added two new requirements CONV-071 and CONV-071a in section 6.1.1, and deleted one future requirement CONV-025 from appendix B.1, subjected to CR#CPM-2016-0049R01
		6.1.1	Added two new requirements CONV-072 and CONV-072a in section 6.1.1, subjected to CR#CPM-2016-0050R01
	20 Aug 2016	6.1.1	Added one new requirement CONV-068c in section 6.1.1, subjected to CR#CPM-2016-0051R01
	30 Aug 2016	3.2 6.1.1	Added one definition for 'CPM Group Session Access Key' in section 3.2, and two new requirements CONV-073 and CONV-074 in section 6.1.1, subjected to CR#CPM-2016-0053R02 and CR#CPM-2016-0054R02
	12 Sep 2016	6.1.1	Splited CONV-073 to three requirements, CONV-073, CONV-073a and CONV-073b; and Splited CONV-074 to three requirements, CONV-074, CONV-074a and CONV-0734, subject to the MINUTES#CPM-2016-0064.
	11 Aug 2017	4.3, 4.4, 5.2, 6.1.1., 6.1.16, Appendix B1, B.2	Incorporated CRs: • OMA-COM-CPM-2017-0089R01-CR_CONRR_A002_RD_Version_2_2_summary • OMA-COM-CPM-2017-0091-CR_CONRR_A001_RD_Version_2_2_scope
Candidate Version OMA-RD-CPM-V2_2	26 Sep 2017	n/a	Status changed to Candidate by TP TP Ref # OMA-TP-2017-0040-INP_CPM-V2_2_ERP_for_1st_Candidate_Approval

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Appendix B. Deferred/Deleted/Transferred Requirements from CPM 1.0 (Informative)

B.1 Requirements Deferred to a Future Release

Label	Description	Enabler Release
	High-Level Functional Requirements:	
CPM-HLF-002b	The CPM Enabler SHALL provide the CPM User with a mechanism to set preferences based on: • the message priority	Future
CPM-HLF-010b	The CPM Enabler SHALL allow a CPM User sending a CPM Standalone Message, to specify more than one reply-to CPM Address.	Future
CPM-HLF-014b	The CPM User SHALL be able to indicate one of the multiple User Preferences Profiles as the active profile for address and device combinations.	Future
CPM-HLF-016	The CPM Enabler SHALL be able to expose a CPM User's Communication Capabilities to other Principals based on user preferences (e.g. to his contacts in the CPM User's address book).	Future
CPM-HLF-017	The CPM Enabler SHALL be able to provide an Authorized Principal with the Communication Capabilities information for his contacts. This information MAY be obtained on a per subscription or on a per request basis (e.g. when initiating a CPM Session or a CPM Conversation). If Communication Capabilities are available, the Communication Capabilities MAY be made available to the CPM User's address books.	Future
CPM-HLF-018	The CPM Enabler SHALL be able to provide an Authorized Principal with the User Communication Preferences for his contacts. This information MAY be obtained on a per subscription or on a per request basis (e.g. when initiating a CPM Session or a CPM Conversation). If User Communication Preferences are available, the User Communication Preferences MAY be made available to the CPM User's address books.	Future
CPM-HLF-019	The CPM Enabler SHALL be able to expose to other Principals (e.g. his contacts in the CPM User's address book) a CPM User's preferred communication means. A user's preferred communication means are based on his User Communication Preferences and his Communication Capabilities.	Future
CPM-HLF-020	The CPM Enabler SHALL be able to provide an Authorized Principal with the preferred communication means that his contacts expose. This information MAY be obtained on a per subscription or on a per request basis (e.g. when initiating a CPM Session or a CPM Conversation). If the preferred communication means of a CPM User's contact are available, the data MAY be made available to the CPM User's address books.	Future
CPM-HLF-021	The CPM Enabler SHALL be allowed to send a CPM Standalone Message or initiate a CPM Session on behalf of a user (e.g. for scheduled conferencing).	Future
CPM-HLF-025a	The CPM Enabler SHALL support CPM Conversations between a CPM User and at least: • IMPS users • POC users • PSTN/PLMN voice users • PSTN/PLMN video users within the capabilities of the Non-CPM Communication Services.	Future
CPM-HLF-027	The CPM Enabler SHALL provide an interface that would allow, under the control of the service provider, CPM functionality to be accessible by an Application.	Future

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	Conversation Requirements:	
CPM-CONV-004a	The CPM Enabler SHALL be able to support removal of content from a CPM Message based on the recipient's preferences, Communication Capabilities, and/or service provider's policies.	Future
CPM-CONV-004b	The CPM Enabler SHALL be able to support the content adaptation for a CPM Message based on device capabilities and service provider's policies.	Future
CPM-CONV-004c	The CPM Enabler SHALL be able to support content adaptation for a CPM Message based on the recipient's preferences.	Future
CPM-CONV-015	The CPM Enabler SHALL ensure that the sender of a CPM Session Invitation receives an indication that the CPM Session Invitation was accepted without prompting the invited user for confirmation.	Future
CPM-CONV-021b	The CPM Enabler SHALL provide an Authorized Principal with information about the Participants of a CPM Group Session (e.g., new Participant joins, Participant leaves, list of current Participants, CPM Session ends), when the Authorized Principal is not a current Participant.	Future
CPM-CONV-026	The CPM Enabler MAY allow an Authorized Principal to join a CPM Session in a "hidden mode"; that is, his/her presence in the communication and identity are not to be disclosed to other Participants, subject to service provider policies.	Future
CPM-CONV-027	The CPM Enabler SHALL ensure that a Principal who has joined a CPM Session in "hidden mode" becomes a non-hidden Participant prior to sending CPM Messages and/or continuous Media from that Principal to the CPM Session.	Future
CPM-CONV-028	The CPM Enabler SHALL allow a CPM User to get information (e.g. Participants, related Media) on the CPM Sessions (including CPM Group Sessions) he/she is currently participating in.	Future
CPM-CONV-029	The CPM Enabler SHALL allow a CPM User to get information (e.g. a list) of the available Public Chat Rooms.	Future
CPM-CONV-046	The CPM Enabler SHALL allow the CPM User to perform a CPM File Transfer inside a CPM Session.	Future
CPM-CONV-034	The CPM Enabler SHOULD allow the CPM User to automatically accept/reject a request to add/modify/delete continuous Media to a CPM Group Session received from the other Participants based on the Communication Capabilities and user preferences. In this case, the CPM Session is only modified to those Participants who accepted the request.	Future
CPM-CONV-036	The CPM Enabler SHALL enable an Authorized Principal (e.g. conference centre recording facility) to store the CPM Session History for his participation in a given CPM Session, and on request, subsequently provide this CPM Session History to another Authorized Principal (e.g. an Authorized Principal who joins the CPM Session halfway through).	Future
CPM-CONV-071	The CPM Enabler SHALL allow CPM Participant(s) of a CPM Group Session (including Long-lived CPM Group Sessions) to add, modify and delete his/her Pseudonum of the CPM Group Session at any given time.	Future
CPM-CONV-071a	The Pseudonym change SHALL be visible for all CPM Participants on all their connected devices (in case of offline devices the change SHALL be visible once these devices join the CPM Group Session) once this change is authorized by the network controlling the CPM Group Session.	Future
CPM-CONV-074	The CPM Enabler SHALL support the generation of the CPM Group Session Access Key.	Future

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CPM-CONV-074a	The CPM Enabler SHALL allow the CPM User to join the CPM Group Session by using the corresponding CPM Group Session Access Key.	Future
CPM-CONV-074b	The CPM Enabler SHALL support the authorization of the group joining request according to service provider's policies.	Future
	Management of Deferred CPM Messages Requirements:	
CPM-DEF-006	The CPM Enabler SHALL support the CPM User's request to be reminded about Deferred CPM Message(s), subject to service provider policy.	Future
CPM-DEF-003b	When the expiry time associated with a Deferred CPM Message is reached the CPM Enabler SHALL be able to take the following action according to user preferences and/or service provider's policy: • Extend the expiry time of the CPM Standalone Message	Future
	CPM Group Handling Requirements:	
CPM-GRP-003	The CPM Enabler MAY allow an Authorized Principal to search for CPM Group Sessions based on given criteria about the CPM Group Session.	Future
CPM-GRP-005	The CPM Enabler MAY allow an Authorized Principal to create a CPM Pre-defined Group on behalf of another Principal and transfer ownership rights over the group to that Principal.	Future
CPM-GRP-006	The CPM Enabler MAY allow the following continuous Media specific floor control: • Media burst control based on the group's policies.	Future
CPM-GRP-007	The CPM Enabler MAY allow an Authorized Principal with a mechanism to ask for notifications of changes to the CPM Group Membership Rules of the groups he/she is part of, according to service provider's policy.	Future
	Presence Requirements:	
CPM-PRS-001	If Presence Information is available, the CPM Enabler SHALL be able to use that information to enhance the CPM user experience.	Future
CPM-PRS-002	The CPM Enabler MAY support a set of CPM-specific presence parameters on behalf of the CPM Users that derive from different Communication Capabilities (e.g. video-busy).	Future
	Media Support Requirements:	
CPM-MED-001a	The CPM Enabler SHALL support continuous Media of at least the following kinds: • Audio • Video	Future
CPM-MED-004	The CPM Enabler SHALL allow an inviting CPM User to indicate which offered Media Types are the preferred Media Types in a CPM Session Invitation.	Future
CPM-MED-006	The CPM Enabler SHALL support a request from a sending Application not to perform content adaptation.	Future
CPM-MED-008	If two or more continuous Media are simultaneously exchanged in the same CPM Session, or if there is more than one CPM Conversation containing continuous Media in parallel, the CPM Enabler SHOULD provide the means to filter the continuous Media based on the user's preferences (e.g. session priority, listen to one voice/audio stream only), Communication Capabilities, and service provider's policy.	Future
	Network Storage Requirements:	
CPM-STOR-006	The CPM Enabler SHALL provide a CPM User with a mechanism to activate and deactivate on demand the storing of a CPM Session to his/her network-based storage during this CPM Session.	Future

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CPM-STOR-020	The CPM Enabler SHALL allow an Authorized Principal to give permission over specific items (Media, CPM Conversation Histories, CPM Messages, CPM File Transfer Histories, CPM Session Histories, folders) either at the time of storage of these items to his/her network-based storage or at a later time.	Future
CPM-STOR-022	The CPM Enabler SHALL allow an Authorized Principal to set a deadline after which a sharing permission to specific items (Media, CPM Conversation Histories, CPM Messages, CPM File Transfer Histories, CPM Session Histories, folders) in his/her network-based storage will be revoked automatically.	Future
CPM-STOR-023	The CPM Enabler SHALL allow an Authorized Principal to specify which permission attributes (e.g. read/write access, access deadline, list of Principals who have access permission) associated to specific items (Media, CPM Conversation Histories, CPM Messages, CPM File Transfer Histories, CPM Session Histories, folders) in the network-based storage can be shown to other Principals.	Future
CPM-STOR-024	The CPM Enabler SHALL be able, upon the request of a CPM User who owns a network-based storage, to inform another Principal by notification that he/she has been given/modified/revoked permission to specific items (Media, CPM Conversation Histories, CPM Messages, CPM File Transfer Histories, CPM Session Histories, folders) in his/her network-based storage.	Future
CPM-STOR-025a	The CPM Enabler SHALL be able to record actions being performed on a Principal's network-based storage. Actions Example: uploaded/modified/removed some specific items (Media, CPM Conversation Histories, CPM Messages, CPM File Transfer Histories, CPM Session Histories).	Future
CPM-STOR-025b	The CPM Enabler SHALL be able to notify an Authorized Principal about actions being performed on the Principal's network-based storage.	Future
CPM-STOR-028	When a user's network-based storage quota is close to being exceeded or has been exceeded, the CPM Enabler SHALL be able to send an overflow notification to that user, based on service provider policies.	Future
CPM-STOR-029	The CPM Enabler SHALL be able to delete items (Media, CPM Conversation Histories, CPM Messages, CPM File Transfer Histories, CPM Session Histories) from a user's network-based storage according to service provider's policy (e.g. CPM Messages older than 'x' days).	Future
CPM-STOR-030	The CPM Enabler SHALL allow a CPM User to request to be notified about specific item(s) in the user's network-based storage before they are going to be deleted as a result of the service provider's policy.	Future
CPM-STOR-031	When a CPM User requested to be notified about specific item(s) in the user's network-based storage before they are going to be deleted, the CPM Enabler SHALL be able to send the corresponding notification to that user, based on service provider's policy.	Future
CPM-STOR-032	The CPM Enabler SHALL allow an Authorized Principal to manage (e.g. include in a CPM Message, delete from network-based storage, forward, upload to the network-based storage from the client, download from the network-based storage to the client) CPM Conversation Histories belonging to a CPM User either as a whole, or partially, i.e. one or more CPM Messages, CPM File Transfer Histories or CPM Session Histories.	Future
	Multi-devices Environment Requirements:	
CPM-MLD-002	The CPM Enabler SHALL be able to deliver continuous Media to all or a subset of the devices with which the CPM User is registered based on Media characteristics, Communication Capabilities, user preferences and/or service provider's policy.	Future

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CPM-MLD-021	The CPM Enabler SHALL be able to, when the CPM User has accepted the CPM File Transfer on one of his/her devices, based on CPM User settings and service provider's policy, keep the outstanding CPM File Transfer requests pending on the other devices left pending until acceptance, rejection, or expiration (instead of cancelling these outstanding CPM File Transfer requests immediately).	Future
CPM-MLD-007b	The CPM Enabler SHALL be able to, when the CPM User has accepted the CPM Session Invitation on one of his/her devices, based on CPM User settings and service provider's policy, keep the outstanding CPM Session Invitations pending on the other devices left pending until acceptance, rejection, or expiration (instead of cancelling these outstanding CPM Session Invitations immediately).	Future
CPM-MLD-008b	The CPM Enabler SHALL be able to, when the CPM User has rejected the CPM Session Invitation on one of his/her devices, based on CPM User settings and service provider's policy, keep the outstanding CPM Session Invitations pending on the other devices until acceptance, rejection, or expiration (instead of cancelling these outstanding CPM Session Invitations immediately).	Future
CPM-MLD-009	The CPM Enabler SHALL allow the CPM User to switch a CPM Session from one device to another device with minimal interruption of the CPM Session.	Future
CPM-MLD-010	When a CPM User requests to switch a CPM Session from one device to another one, the CPM Enabler SHALL allow CPM User to have the CPM Session History or part of it (based upon user's preferences and/or the service provider's policy) displayed on the new device.	Future
CPM-MLD-012	The CPM Enabler SHALL allow a CPM User to choose which of his/her devices SHALL be used for the added/modified continuous Media within the current CPM Session.	Future
CPM-MLD-013	The CPM Enabler SHALL provide CPM User with a mechanism to retrieve, from one of his/her devices, a list of his/her registered devices bound with all of his/her registered CPM Addresses.	Future
CPM-MLD-014	For each of his registered CPM Addresses, the CPM Enabler SHALL provide the CPM User with the following information per registered device bound to that CPM Address: • the capabilities of the device • the list of current CPM Sessions together with associated Media	Future
	Support of Multiple CPM Addresses Requirements:	
CPM-MAD-002	The CPM Enabler SHALL allow a CPM User to use multiple CPM Addresses in parallel.	Future
CPM-MAD-003	The CPM Enabler SHALL be able to provide each CPM Address with a distinct network-based storage (e.g. storage of Media).	Future
CPM-MAD-004	The CPM Enabler SHALL allow a CPM User to have a common set of preference settings for all or a subset of his/her CPM Addresses.	Future
CPM-MAD-006	The CPM Enabler SHALL allow a CPM User to have a common network-based storage (e.g. storage of Media) for all or a subset of his/her CPM Addresses.	Future
	Converged Address Book Requirements:	
CPM-CAB-017	If information about the CPM User's CAB is available, the CPM Enabler SHALL be able to use that information to enhance the CPM user experience.	Future

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	Applications Requirements:	
CPM-VAS-001	The CPM Enabler SHALL allow any CPM Conversation between Applications (including those provided by VASPs) and other Principals regardless of: • the content of the CPM Message (text or multimedia) • the desired user experience (e.g. immediate or deferred delivery) • the number of recipients • the messaging technologies supported by end user's device • whether the intended recipient is a CPM User or not	Future
CPM-VAS-002	The CPM Enabler SHALL provide an interface to Applications (including those provided by VASPs) that supports at least the functionalities provided by existing interfaces (e.g. MM7 between third party Applications and MMS Relay/Server, SMPP between third party Applications and SMS-SC).	Future
CPM-VAS-003	The CPM Enabler SHALL be able to receive CPM Standalone Messages / CPM File Transfers / CPM Session Invitations intended for a VASP from the different non-CPM messaging platforms, in case that the users have sent them from a non CPM-capable device. The CPM Enabler SHALL subsequently forward the CPM Standalone Messages / CPM File Transfers /CPM Session Invitations to the intended VASP.	Future
CPM-VAS-004	The CPM Enabler SHALL support the originator of a CPM Standalone Message, a CPM File Transfer or a CPM Session Invitation to indicate, in that CPM Standalone Message or CPM Session Invitation, the source VAS Application in the CPM-enabled originating entity (device or VASP).	Future
CPM-VAS-005	The CPM Enabler SHALL support the originator of a CPM Standalone Message, a CPM File Transfer or a CPM Session Invitation to indicate, in that CPM Standalone Message or CPM Session Invitation, the target VAS Application in the CPM-enabled receiving entity (device or VASP).	Future
CPM-VAS-006	The CPM Enabler SHALL support generating and sending of event notification with relevant information (e.g. user causing the event, type of event, …) back to the Application so that the Application may take suitable service logic decisions. Examples of event classes: • a Participant joining/leaving a communication, including in a hidden mode • the registration/de-registration of a device with a CPM service • the modification of a session (Media addition, switching to another device, …) • an access to messages or Media in the network-storage, a change in access rights over Media or storage • content adaptation of a message • attempts of unidentified and/or unauthenticated Principals to use a CPM service	Future
CPM-VAS-007	The CPM Enabler SHALL allow the event notification to be set and activated • on a per user or on a per Application basis • based on time (e.g. for scheduled event)	Future
CPM-VAS-008	The CPM Enabler SHALL allow an Application with appropriate rights to send a CPM Standalone Message, perform a CPM File Transfer or initiate a CPM Session on behalf of a CPM User (e.g. for scheduled conferencing or when the recipient(s) become(s) available).	Future

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CPM-VAS-009	The CPM Enabler SHALL allow an Application with appropriate rights to exercise control over a CPM Conversation including but not limited to starting/stopping a CPM Session (e.g. for time-bound conferencing Applications), listing/searching ongoing CPM Sessions & associated Participants, replaying the recent history of a CPM Conversation (e.g. in case of device switching), adding/removing Participants to a CPM Session (e.g. for a moderated chat room).	Future
CPM-VAS-010	The CPM Enabler SHALL allow an Application with appropriate rights to use moderation functions over Media usage (e.g. for a conferencing Application where only the authorized speaker might be allowed to send his video stream to the CPM Session Participants).	Future
CPM-VAS-011	The CPM Enabler SHALL allow an Application with appropriate rights to use Media handling functions such as adding/removing Media (continuous) to/from a CPM Session, Media redirection (e.g. indicate that a video shall be sent to a specified end point), Media splitting (audio vs. video, …)	Future
CPM-VAS-012a	The CPM Enabler SHALL allow a CPM service provider to enable/disable access by an Application and/or VASP to the CPM Enabler.	Future
CPM-VAS-012b	The CPM Enabler SHALL allow a CPM service provider to select on a per Application and/or VASP basis which specific CPM Enabler features will be accessible to Applications.	Future
CPM-VAS-013	The CPM Enabler SHALL be able to provide anonymity for the CPM User when communicating with an Application.	Future
	Interworking Requirements:	
CPM-IWF-013	When provided with presence support, a CPM User MAY be able to subscribe to Presence Information of a user that uses a Non-CPM Communication Service that supports Presence Information exchange.	Future
CPM-IWF-014	For a CPM User provided with presence support, it MAY be possible to make available Presence Information of that CPM User towards Non-CPM Communication Service that supports Presence Information exchange.	Future
CPM-IWF-015	When provided with presence support, a CPM User MAY be provided with information generated by the CPM Enabler about users of a Non-CPM Communication Service that does not support Presence Information exchange (e.g. indication of “non-CPM service”).	Future
	Security Requirements:	
CPM-SEC-002	The CPM Enabler SHALL allow a CPM service to provide CPM Users with Content Screening based on user preferences and service provider policies.	Future
CPM-SEC-003	The CPM Enabler SHOULD allow a CPM service to protect CPM Users against Unwanted Messaging, according to the user’s preferences and service provider policies.	Future
CPM-SEC-004	The CPM Enabler MAY allow a CPM service to protect CPM Users against Malware, according to the user’s preferences and service provider policies.	Future
	Charging Requirements:	
CPM-CHA-001	The CPM Enabler SHALL support the creation of Charging Events needed for different charging models, e.g. charging for individual events, charging for sessions, charging based on service subscriptions, and to facilitate Charging Correlation.	Future
CPM-CHA-002	The CPM Enabler SHALL support Online Charging.	Future
CPM-CHA-003	The CPM Enabler SHOULD support Offline Charging.	Future

Table 19: Requirements Deferred to a Future Release

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B.2 Requirements Deleted

Label	Description	Enabler Release
	High-Level Functional Requirements:	
CPM-HLF-026	The CPM Enabler SHALL allow the CPM User to use any type of connectivity, subject to service provider policies and the capabilities of the CPM enabled-network (e.g. to access his/her network-based storage).	Deleted
	Conversation Requirements:	
CPM-CONV-003	The CPM Enabler SHALL defer CPM Standalone Message delivery according to service provider policies (e.g. hold for specific time period, hold only a certain number of messages) and based on user's preferences.	Deleted
CPM-CONV-007	A Deferred CPM Message SHALL either be automatically delivered when the CPM User is available, or the CPM User SHALL be notified for possible retrieval by the CPM User.	Deleted
CPM-CONV-008	The CPM Enabler SHALL support the CPM User's request to be reminded about Deferred CPM Message(s), subject to service provider policy.	Deleted
CPM-CONV-024	The CPM Enabler SHOULD provide a mechanism for a CPM User to allow CPM Users to contact each other using Pseudonyms assigned to them for a CPM Group Session.	Deleted
CPM-CONV-047	The CPM Enabler SHALL allow a preview of the file to be transferred to be provided in the CPM File Transfer invitation.	Deleted
CPM-CONV-073b	The CPM Client SHALL notify the specified participant(s) that is (are) denoted via this mechanism.	Deleted
	Network Storage Requirements:	
CPM-STOR-002	The CPM Enabler SHALL allow CPM Users to suppress automatic synchronization of locally-deleted CPM related content.	Deleted

Table 20: Requirements Deleted

B.3 Requirements Transferred to other Enablers

Label	Description	Enabler Release
	Presence Requirements:	
CPM-PRS-003	The CPM Enabler SHALL allow a CPM User to indicate the contacts whose presence should be watched, on a per User Preferences Profile basis.	Deleted from CPM V1.0 and transferred to CAB V1.0*
	Converged Address Book Requirements:	
CPM-CAB-001	The CPM Enabler SHALL provide a network based address book for the CPM User.	Deleted from CPM V1.0 and transferred to CAB V1.0*
CPM-CAB-002	The CAB SHALL provide the CPM User with all available information which may enable him to invoke any kind of CPM Conversation.	Deleted from CPM V1.0 and transferred to CAB V1.0*

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CPM-CAB-003	The CAB SHALL include contact information such as: • Full name • Display name • Addresses (e.g. CPM Address, email address, phone number, SIP address, home address) • Basic personal data (e.g. birth date, description, gender, height) • Extended personal data (e.g. areas of expertise, avatars data, hobbies, interests, photo or video data, title) • Web resources (e.g. homepage url, weblog url, publications url) • Organisational data (e.g. business category, department name, job title, alternative contact or agent)	Deleted from CPM V1.0 and transferred to CAB V1.0*
CPM-CAB-004	The CAB SHALL be able to combine information coming from the personal profile published by the CPM User's contacts with the information that the CPM User customizes about these contacts.	Deleted from CPM V1.0 and transferred to CAB V1.0*
CPM-CAB-005	The CAB MAY include as a part of the contact information, the information required for Presence Subscription.	Deleted from CPM V1.0 and transferred to CAB V1.0*
CPM-CAB-006	The CPM User MAY be able to select different groups of contacts or single contacts in his/her address book and indicate the values of presence attributes to be exposed to those contacts.	Deleted from CPM V1.0 and transferred to CAB V1.0*
CPM-CAB-007	The CPM Enabler SHALL allow the CPM User to add/change/delete contacts information in his address book e.g. display name, picture.	Deleted from CPM V1.0 and transferred to CAB V1.0*
CPM-CAB-008	The CPM Enabler SHALL allow the CPM User to manage (e.g. add/change/delete) his own personal contact information and to share it (either completely or partially) with other authorized users.	Deleted from CPM V1.0 and transferred to CAB V1.0*
CPM-CAB-009	The CPM Enabler SHALL allow the CPM User to set up individual authorisation rules for sharing his own personal contact information on a per-user or a per CPM Group basis.	Deleted from CPM V1.0 and transferred to CAB V1.0*
CPM-CAB-010	The CPM Enabler SHALL allow the CPM User to request to be notified whenever a contact changes his own personal contact information.	Deleted from CPM V1.0 and transferred to CAB V1.0*
CPM-CAB-011	The CAB SHALL, according to the user's preferences and/or service provider's policy, be able to either automatically or by request keep up to date all address books (e.g. addition, deletion, modification of contacts or groups of contacts, address book structure) in all CPM enabled registered devices bound with the associated registered CPM Address(es).	Deleted from CPM V1.0 and transferred to CAB V1.0*
CPM-CAB-012	The CAB SHALL, according to the user's preferences and/or service provider's policy, be able to either automatically or by request keep all CPM enabled registered devices bound with the associated registered CPM Address(es) up to date with information required for Presence Subscription, User Communication Preferences, and Communication Capabilities.	Deleted from CPM V1.0 and transferred to CAB V1.0*
CPM-CAB-013	The CAB SHOULD provide the CPM User with the ability to organize his contacts into different categories of contacts (e.g. family, friends, colleagues).	Deleted from CPM V1.0 and transferred to CAB V1.0*

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CPM-CAB-014	The CPM User SHALL be able to give selective access and modification rights for his CAB to an Authorized Principal.	Deleted from CPM V1.0 and transferred to CAB V1.0*
CPM-CAB-015	The CAB SHALL provide at least one address book per CPM User.	Deleted from CPM V1.0 and transferred to CAB V1.0*
CPM-CAB-016	The CAB MAY support one address book per CPM Address of the CPM User.	Deleted from CPM V1.0 and transferred to CAB V1.0*

* Footnote: the CAB Enabler development is independent and this requirement may change within the CAB RD.

Table 21: Requirements Transferred to other Enablers

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