



# **Enabler Release Definition for Push-to-Talk over Cellular**

**Candidate Version 1.0 – 27 Jan 2006**

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**Open Mobile Alliance**  
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# 1. Scope

The scope of this document is limited to the Enabler Release Definition of Push-to-Talk over Cellular according to OMA Release process and the Enabler Release specification baseline listed in section 6.

## 2. References

### 2.1 Normative References

- [IOPPROC] “OMA Interoperability Policy and Process”, Version 1.1, Open Mobile Alliance™, OMA-IOP-Process-V1\_1, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [RFC2119] “Key words for use in RFCs to Indicate Requirement Levels”, S. Bradner, March 1997, [URL:http://www.ietf.org/rfc/rfc2119.txt](http://www.ietf.org/rfc/rfc2119.txt)
- [RFC2234] “Augmented BNF for Syntax Specifications: ABNF”. D. Crocker, Ed., P. Overell. November 1997, [URL:http://www.ietf.org/rfc/rfc2234.txt](http://www.ietf.org/rfc/rfc2234.txt)
- [OMA-AC] OMA PoC Application Characteristics:  
[http://member.openmobilealliance.org/ftp/OPS/Test/test-OMNA-DM\\_APPID-registry.htm](http://member.openmobilealliance.org/ftp/OPS/Test/test-OMNA-DM_APPID-registry.htm)
- [POC-CP] OMA PoC Control Plane Document Version 1.0 Open Mobile Alliance™  
OMA-TS-PoC-Control Plane-V1\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [POC-UP] OMA PoC User Plane Document Version 1.0 Open Mobile Alliance™  
OMA-TS-PoC-User Plane-V1\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [POC-XDM] OMA PoC XDM Specification Document Version 1.0 Open Mobile Alliance™  
OMA-PoC\_XDM\_Specification-V1\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)

NOTE: There are additional normative references given in the above listed documents.

### 2.2 Informative References

- [POC-AD] OMA PoC Architecture Document Version 1.0. Open Mobile Alliance™.  
OMA-AD-PoC-V1\_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)

## 3. Terminology and Conventions

### 3.1 Conventions

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC2119].

All sections and appendixes, except “Scope” and “Introduction”, are normative, unless they are explicitly indicated to be informative.

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

### 3.2 Definitions

<b>1-1 PoC Session</b>	A feature enabling a PoC User to establish a PoC Session with another PoC User
<b>1-many Session</b>	A PoC Group Session that is not a 1-many-1 Session.
<b>1-many-1 Session</b>	A PoC Group Session for a Pre-arranged PoC Group in which one Participant is a Distinguished Participant and all other Participants are Ordinary Participants.
<b>Access Control</b>	User specified rules that restrict the set of other users that may establish PoC Sessions to the user.
<b>Active PoC Session</b>	An Active PoC Session is a PoC Session that carries both RTP and Talk Burst Control Protocol based packets to the user. If the user has multiple PoC Sessions, at most only one may be active at any given time.
<b>Ad-hoc PoC Group</b>	An Ad-hoc PoC Group Session is a PoC Session for multiple PoC Users that does not involve the use or definition of a Pre-arranged or Chat Group.
<b>Answer Mode</b>	The Answer Mode Indication is the current Answer Mode PoC service setting of the PoC Client.
<b>Answer Mode Indication</b>	The Answer Mode Indication is the current Answer Mode PoC service setting of the PoC Client.
<b>Application Server</b>	An Application Server in 3GPP IMS or 3GPP2 MMD is a functional entity that implements the service logic for SIP sessions. When the SIP/IP Core used for the PoC service is according to 3GPP IMS or 3GPP2 MMD specifications, the PoC Server implements the Application Server functionality.
<b>Authenticated Originator's PoC Address</b>	The authenticated Originator's PoC Address is the PoC Address of the originating PoC Client that has been authenticated by the SIP/IP Core.
<b>Automatic Answer Mode</b>	Automatic Answer Mode is a PoC Client mode of operation in which the PoC Client accepts a PoC Session establishment request without manual intervention from the user; Media is immediately played when received.
<b>Chat PoC Group</b>	A Chat PoC Group is a persistent Group in which each member individually joins the PoC Session, i.e., the establishment of a PoC Session to a Chat PoC group does not result in other members of the Chat PoC Group being invited.
<b>Chat PoC Group Session</b>	A Chat PoC Group Session is a PoC Session established to a Chat PoC Group.
<b>Conference-factory-URI</b>	A Conference Factory URI for PoC service is a provisioned SIP URI that identifies the PoC service in the Home PoC Network.
<b>Confirmed Indication</b>	A Confirmed Indication is a signalling message returned by the PoC Server to confirm that the PoC Server, all other network elements intermediary to the PoC Server and a terminating PoC Client are able and willing to receive Media.
<b>Contact List</b>	A Contact List is a list available to the PoC User that contains the addresses of PoC Users or PoC Groups.
<b>Control Plane</b>	The Control Plane is the specification of the signaling between the PoC Client and PoC Server, and between PoC Servers for the Push-to-talk over Cellular (PoC) service.
<b>Controlling PoC Function</b>	The Controlling PoC Function is implemented in a PoC Server and provides centralized PoC Session handling, which includes RTP Media distribution, Talk Burst Control, policy enforcement for participation

in Group Sessions, and the Participant information.

<b>Conversation</b>	A Conversation is a series of Talk Bursts within a PoC Session in which the inter-arrival spacing of the Talk Bursts is less than a defined time interval; typically, the Talk Bursts are associated to a logical exchange between two or more users.
<b>Distinguished Participant</b>	The Distinguished Participant is a Participant in a 1-many-1 Session that sends RTP Media to all Ordinary Participants, and that receives RTP Media from any Ordinary Participant.
<b>Dormant PoC Session</b>	A Dormant PoC Session is a PoC Session in which the user receives TBCP and no RTP Media. If the user has multiple PoC Sessions, all except at most one PoC Session are dormant.
<b>Enabler Release</b>	Collection of specifications that combined together form an enabler for a service area, e.g. a download enabler, a browsing enabler, a messaging enabler, a location enabler, etc. The specifications that are forming an enabler should combined fulfil a number of related market requirements.
<b>Exploder URI</b>	An Exploder URI is an address of a SIP URI-list service. A URI-list service is a specialized application service that receives a SIP request with a list of URIs and generates a similar SIP request to each of the URIs on the list. The SIP URI-list service includes a copy of the body of the original SIP request in the generated SIP requests.
<b>Filter Criteria</b>	Filter Criteria is routing logic used in the 3GPP IMS or 3GPP2 MMD SIP Core to route SIP requests to the correct Application Server.
<b>Group</b>	A Group is a predefined set of PoC users that is identified by a SIP URI. A PoC Client uses the Group to establish PoC Sessions and to define PoC Session access policy.
<b>Group Advertisement</b>	A Group Advertisement is a feature that provides the capability to inform other PoC Users of the existence of a PoC Group.
<b>Group List</b>	A list of members in a Pre-arranged or Restricted Chat PoC Group. Each member is identified by a SIP URI or a TEL URL.
<b>Home PoC Network</b>	The Home PoC Network is a network comprising a SIP/IP Core and PoC Server, both operated by the user's PoC service provider. The Home PoC Network is the same as the Home Network defined in IMS and MMD specifications.
<b>Home PoC Server</b>	The Home PoC Server is the PoC Server owned by service provider that provides PoC service to the user.
<b>Incoming Instant Personal Alert Barring</b>	Incoming Instant Personal Alert Barring is a PoC service setting for the PoC Client that conveys the PoC User's desire for the PoC service to block all incoming Instant Personal Alerts.
<b>Incoming PoC Session Barring</b>	Incoming PoC Session Barring is a PoC service setting for the PoC Client that conveys the PoC User's desire for the PoC service to block all incoming PoC Session requests.
<b>Instant Personal Alert</b>	Instant Personal Alert is a feature in which a PoC User sends a SIP based instant message to a PoC User requesting a 1-1 PoC Session.
<b>Invited PoC Client</b>	An Invited PoC Client is a PoC Client that is invited to a PoC Session.
<b>Inviting PoC Client</b>	An Inviting PoC Client is a PoC Client that invites other PoC User(s) to a PoC Session.
<b>Invited PoC User</b>	The PoC User who has been invited to a PoC Session.
<b>Manual Answer Mode</b>	Manual Answer Mode is a mode of operation in which the PoC Client requires the PoC User to manually accept the PoC Session invitation before the PoC Session is established.
<b>Media Parameters</b>	Media Parameters are SIP/SDP based information exchanged between the PoC Server and the PoC Client that specify the characteristics of the media for a PoC Session being established or that already exists.
<b>Minimum Functionality Description</b>	Description of the guaranteed features and functionality that will be enabled by implementing the minimum mandatory part of the Enabler Release.
<b>On-demand Session</b>	An On-Demand Session is a PoC Session set-up mechanism in which all Media Parameters are negotiated at PoC Session establishment.
<b>Ordinary Participant</b>	An Ordinary Participant is a Participant in a 1-many-1 Session that is only able to send media to the Distinguished Participant, and that likewise is only able to receive media from the Distinguished Participant.
<b>Participant</b>	A Participant is a PoC User in a PoC Session.
<b>Participating PoC</b>	The Participating PoC Function is implemented in a PoC Server, and provides PoC Session handling.

<b>Function</b>	which includes policy enforcement for incoming PoC Sessions and relays Talk Burst Control messages between the PoC Client and the PoC Server performing the Controlling PoC Function. The Participating PoC Function may also relay RTP Media between the PoC Client and the PoC Server performing the Controlling PoC Function.
<b>PDP Context</b>	Packet Data Protocol Context. A Packet Data Protocol (PDP) Context is a logical connection between a terminal and network, as defined in 3GPP General Packet Radio Service (GPRS) specifications. A PDP Context, as a logical connection, is mapped onto a physical layer radio connection. A PDP Context may be closely associated with a single application level flow, e.g., a voice service instance, or it may support multiple application level flows, e.g., a best effort packet data service instance.
<b>PoC Address</b>	A PoC Address identifies a PoC User. The PoC Address can be used by one PoC User to request communication with other PoC Users.
<b>PoC Client</b>	A PoC Client is a PoC functional entity that resides on the PoC User Equipment that supports the PoC service. PoC service
<b>PoC Group</b>	A PoC Group is a predefined set of PoC Users together with its attributes. A PoC Group is identified by a SIP URI.
<b>PoC Group Identity</b>	The PoC Group Identity is a SIP URI of the Pre-arranged PoC Group or Chat PoC Group.
<b>PoC Group Session</b>	A PoC Group Session is a Pre-arranged PoC Group, Ad-hoc PoC Group or Chat PoC Group Session.
<b>PoC Server</b>	The PoC Server implements the 3GPP IMS and 3GPP2 MMD application level network functionality for the PoC service. A PoC Server may perform the role of the Controlling PoC Function or Participating PoC Function, or both at the same time.
<b>PoC Session</b>	A PoC Session is a SIP session established by the procedures of this Specification. This Specification supports the following types of PoC Sessions: 1-1 PoC, Ad-hoc PoC Group, Pre-arranged PoC Group, or Chat PoC Group Session.
<b>PoC Session Identifier</b>	The PoC Session Identifier is an identifier associated with a PoC Session that uniquely distinguishes a particular PoC Session from all other PoC Sessions, including those that currently exist and those that do not.
<b>PoC Session Identity</b>	SIP URI received by the PoC Client during the PoC Session establishment in the Contact header or in the TBCP Connect message in case of using Pre-established Session.
<b>PoC Subscriber</b>	A PoC Subscriber is one whose service subscription includes the PoC service.  NOTE: In [PoC RD V1.0] the term “PoC Subscriber” is sometimes used to mean the same as term “PoC User” in [OMA PoC AD], [OMA PoC CP] and [OMA PoC UP].
<b>PoC User</b>	A PoC User is a user of the PoC service.  NOTE: In [PoC RD V1.0] the term “PoC Subscriber” is sometimes used to mean the same as term “PoC User” in [OMA PoC AD], [OMA PoC CP] and [OMA PoC UP].
<b>Pre-arranged PoC Group</b>	A Pre-arranged PoC Group is a persistent PoC Session Identity that has an associated set of PoC members. The establishment of a PoC Session to a prearranged PoC Group results in all members being invited.
<b>Pre-established Session</b>	The Pre-established Session is a SIP Session established between the PoC Client and the PoC Server that performs the Participating PoC Function. The PoC Client establishes the Pre-established Session prior to making requests for PoC Sessions to other PoC users. To establish a PoC Session based on a SIP request from the user, the PoC Server conferences other PoC Servers/Users to the Pre-established Session so as to create an end-to-end connection.
<b>Primary PoC Session</b>	The Primary PoC Session is a PoC Session that the PoC User selects in preference to other PoC Sessions. When the user has Simultaneous PoC Sessions, the Primary PoC Session has a priority over Secondary PoC Sessions.
<b>Remote PoC Network</b>	A Remote PoC Network is a network that consists of a SIP/IP Core and a PoC Server. The Remote PoC Network is owned or operated by a service provider other than the one to which the PoC Client subscribes.
<b>Restricted Group</b>	A Group that can be joined only by a PoC User that is a member of the Group. A Restricted Group has a Group List.
<b>RTP Media</b>	RTP Media is the media carried in an RTP payload.
<b>RTP Session</b>	A RTP Session is considered as an association that allows exchange of RTP Media streams and RTCP messages among a set of PoC functional entities.



<b>Secondary PoC Session</b>	A Secondary PoC Session is a PoC Session for which the PoC User receives media when there is no media present on the Primary PoC Session.
<b>Session Type</b>	A Session Type is a SIP URI-parameter used to convey the type of SIP URI, and may take on one of the following values: adhoc, prearranged, chat or 1-1.
<b>Served PoC User</b>	A PoC User that obtains a PoC service from a PoC Server located in the Home PoC Network.
<b>Service Instance</b>	A Service Instance is the instantiation of a logical connection across the radio interface associated with a particular protocol stack. Service Instances, as logical connections, are mapped onto the physical layer radio connections. A Service Instance may be closely tied to a single application level flow, e.g., a voice service instance, or may support multiple application level flows, e.g., a best effort packet data service instance.
<b>SigComp</b>	SIGCOMP is a signaling compression mechanism specified in [RFC3320]; SIGCOMP in PoC provides for the compression of SIP requests and responses.
<b>Simultaneous PoC Session</b>	When a PoC User is a Participant in more than one PoC Session simultaneously using the same PoC Client.
<b>SIP Session</b>	A SIP Session is a SIP dialog. From RFC 3261, a SIP dialog is defined as follows: A dialog is a peer-to-peer SIP relationship between two UAs that persists for some time. A dialog is established by SIP messages, such as a 2xx response to an INVITE request. A dialog is identified by a call identifier, local tag, and a remote tag. A dialog was formerly known as a call leg in RFC 2543.
<b>SIP URI</b>	From RFC 3261: "A SIP or SIPS URI identifies a communications resource" and "follows the guidelines in RFC 2396 [5]". PoC uses SIP URIs to identify PoC Clients, PoC Servers, and PoC Sessions, resource lists that point to URI lists, etc.
<b>SIP User Agent</b>	A SIP User Agent is any SIP peer that performs SIP signaling [RFC3261].
<b>Talk Burst</b>	A Talk Burst is the flow of media from a PoC Client while that has the permission to send media.
<b>Talk Burst Control</b>	Talk Burst Control is a control mechanism that arbitrates requests from the PoC Clients, for the right to send media.  NOTE: In [PoC RD V1.0] the term "Floor Control" is used to mean the same as term "Talk Burst Control" in [OMA PoC AD], [OMA PoC CP] and [OMA PoC UP].
<b>Talk Burst Control Protocol</b>	Talk Burst Control Protocol (TBCP) is a protocol for performing Talk Burst Control, and is defined in these specifications.
<b>Talker Identification</b>	Talker Identification is the procedure by which the current talker's identity is determined and made known to listeners on the PoC Session.
<b>Unconfirmed Indication</b>	The Unconfirmed Indication is an indication returned by the PoC Server to confirm that it is able to receive media and believes the PoC Client is able to accept media; the PoC Server sends the Unconfirmed Indication prior to determining that all egress elements are ready or even able to receive media.
<b>Unrestricted Group</b>	An Unrestricted Group is a PoC Group that any PoC User may join.
<b>User</b>	A User is any entity that uses the described features through the User Equipment.
<b>User Equipment</b>	User Equipment is a hardware device that supports a PoC Client e.g., a wireless phone.
<b>User Plane</b>	The User Plane includes the media and media control signaling (e.g., Talk Burst Control Protocol) between the PoC Client and PoC Server.

### 3.3 Abbreviations

<b>3GPP</b>	3 <sup>rd</sup> Generation Partnership Project
<b>3GPP2</b>	3 <sup>rd</sup> Generation Partnership Project 2
<b>ERDEF</b>	Enabler Requirement Definition
<b>ERELD</b>	Enabler Release Definition
<b>IETF</b>	Internet Engineering Task Force
<b>IMS</b>	IP Multimedia Subsystem

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<b>OMA</b>	Open Mobile Alliance
<b>PoC</b>	Push-to-talk over Cellular
<b>RFC</b>	Request For Comments (IETF specifications)
<b>RTCP</b>	RTP Control Protocol
<b>RTP</b>	Real-time Transport Protocol
<b>SDP</b>	Session Description protocol
<b>SIP</b>	Session Initiation Protocol
<b>TBCP</b>	Talk Burst Control Protocol
<b>UDP</b>	User Datagram Protocol
<b>UE</b>	User Equipment
<b>UP</b>	User Plane
<b>URI</b>	Uniform Resource Identifier
<b>UTF-8</b>	UCS Transformation Format 8
<b>XML</b>	Extensible Mark-up Language

## 4. Introduction

This document outlines the Enabler Release Definition for Push To Talk over Cellular (PoC) version 1.0 and the respective conformance requirements for PoC Clients and PoC Servers implementations claiming compliance to it as defined by Open Mobile Alliance across the specification baseline.

Push-To-Talk over Cellular (PoC) service is a *two-way form* of communications that allows PoC Users to engage in immediate communication with one or more PoC Users. The PoC service is similar to a “walkie-talkie” application in the way that by pressing a button a PoC Session with an individual PoC User or to a group of PoC Users is initiated. Receiving Participants hear the sender’s voice either without any action on their part (auto-answer mode), or may be notified and have to accept the call (manual answer mode) before listening to the sender’s voice. In addition, the PoC service provides 2 models for PoC Session establishment: the Pre-established Session mode and the On-demand Session mode. The communication is half-duplex, meaning that one Participant can talk at a time and all other Participants hear the speech. The permission for talk right granting is controlled via a Talk Burst control mechanism. The PoC service enabler supports the:

- 1-1 PoC Session which is the basic capability to set up voice communication between two PoC Users;
- 1-to-many PoC Session which is the capability to enable the setup a voice communication with a multiple number of other PoC Users in an ad-hoc or pre-defined PoC Group manner;
- Instant Personal Alert which is the capability to inform about a PoC User’s wish to communicate and a request to the Invited PoC User to “call-back”.

The PoC service enabler utilizes basic inter-working with the Group Management service enabler and the Presence service enabler. Key features to these enablers are e.g. lists creation and management functions and integration of user’s presence and availability information in the PoC Session setup process. Complementing the basic PoC service, Group Advertisement is available to inform PoC Group members about the existence and the membership of the PoC Group.

## 5. Description of Differences from Previous Version

This version is the intial enabler release.

## 6. Document Listing for PoC

This section is normative.

Doc Ref	Permanent Document Reference	Description
<b>Requirement Document</b>		
[POC-RD]	OMA-RD-PoC-V1_0-20050329-C	Defines the requirements for the Push to Talk over Cellular service capturing the overall service description, primarily from the service subscriber's and user's points of view. It is applicable to network operators, service providers and terminal and infrastructure manufacturers.
<b>Architecture Document</b>		
[POC-AD]	OMA-AD-PoC-V1_0-20060127-C	Defines the overall architecture of PoC V1.0 including informative descriptions of technologies and their uses
<b>Technical Specifications</b>		
[POC-CP]	OMA-TS-PoC-ControlPlane-V1_0-20060127-C	Defines the PoC Control Plane signaling procedures of the PoC Client and PoC Server for push to talk over cellular (PoC) service including example detailed signaling flows for the reference points POC-1, POC-2 and IP-1.
[POC-UP]	OMA-TS-PoC-UserPlane-V1_0-20060127-C	Defines the User Plane procedures for the Push to Talk over Cellular (PoC) service over the POC-3 and the POC-4 reference points as defined in the reference [PoC-AD]. When necessary, inter-working between the Control Plane [PoC-CP] and User Plane is described. If necessary, requirements on the implementation of SIP / IP Core are included..
[POC-XDM]	OMA-TS-PoC-XDM-V1_0-20060127-C	Defines the PoC enabler specific data formats and XCAP application usages.
<b>Supporting Files</b>		
[PoC_AC]	OMA-POC-AC-20050805	Defines the application characteristics parameter for the client provisioning mechanism  Working file in Application Characteristics directory: file: OMA-POC-AC-20050805.txt <a href="http://member.openmobilealliance.org/ftp/OPS/Test/test-OMNA-DM_APPID-registry.htm">http://member.openmobilealliance.org/ftp/OPS/Test/test-OMNA-DM_APPID-registry.htm</a>

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

## 7. Minimum Functionality Description for PoC

This section is informative.

The minimum mandatory functionality for PoC Client and PoC Server includes:

### 1. PoC Client:

- Registration and de-registration
- PoC Session initiation, modification, joining and leaving, termination
- On-demand Session establishment
- PoC session handling for 1-to-1 communication, Pre-arranged PoC Group, Chat Group and Adhoc PoC Group communication
- Instant Personal Alert (receiving)
- Incoming PoC Session Barring
- Manual Answer Mode or Automatic Answer Mode for incoming PoC Session invitations
- Activation and deactivation of setting for service attributes (e.g. Incoming PoC Session Barring, Answer Mode) towards PoC Server
- Media transport (including support of UDP, port number handling, RTP, RTCP )
- Media control by supporting RTCP Sender Report/Receiver Report (SR/RR) compound packets
- PoC Session control
- Talk Burst Control Protocol (TBCP)
- Timer handling

### 2. PoC Server:

- Determination of PoC Server role for performing the Participating or Controlling PoC Function or both.
- Common basic functions for Participating or Controlling PoC Function:
  - Support of PoC Session initiation, modification, joining and leaving, termination
  - PoC Session handling for 1-to-1 communication, Pre-arranged PoC Group, Chat Group and Ad-hoc PoC Group communication
  - Talk Burst Control Protocol (TBCP)
  - Media control by supporting RTCP Sender Report/Receiver Report (SR/RR) compound packets
  - On-demand Session establishment
- Additional specific functions for PoC Server performing the Participating PoC Function
  - Manual or Automatic Answer Mode handling for PoC Session establishment
  - Setting, storing and enforcing different service attribute settings for the PoC Client
- Additional specific functions for PoC Server performing the Controlling PoC Function
  - Media transport (including support of UDP, port number handling, RTP, RTCP )
  - PoC Session control
  - SIP Session modification for Media Parameter according to local policy and based on lowest negotiated media parameters
  - Talker Identification

- Timer handling

The PoC enabler defines the following optional functionality:

1. PoC Client

- Group Advertisement
- Pre-established Sessions
- Simultaneous PoC Sessions
- Scheduling of RTCP packages
- Talker Identification
- Talk Burst requests queuing (e.g. positioning, status) and priority
- User Plane adaptation (voice frame packetisation, voice codec adaptation)
- Timer handling

2. PoC Server

- Common basic functions:
  - Media control by supporting quality feed back
  - User Plane adaptation
  - Instant Personal Alert Barring
  - Group Advertisement
  - Media transcoding
- Additional specific functions for PoC Server performing the Participating PoC Function
  - Pre-established Session
  - Simultaneous PoC Sessions
  - Relay RTP Media packets between the PoC Client and the PoC Server performing the Controlling PoC Function
  - Media transport (including support of UDP, port number handling, RTP, RTCP )
  - Timer handling
- Additional specific functions for PoC Server performing the Controlling PoC Function
  - Talk Burst operation for queuing (e.g. state, position) and priority
  - Session modification for media capabilities according to local policy and based on lowest negotiated media parameters

The PoC enabler defines the following external dependencies:

- Mandatory
  - Group Management Service Enabler
  - Device management
  - Charging
  - SIP/IP core: IP Multimedia Subsystem (IMS) – comment: Chapter 5-Architecture (under Table 1) states that "... SHALL utilize SIP/IP core from IMS as specified in 3GPP and 3GPP2.
  - SIP/IP core: Multimedia Domain (MMD) – comment: Chapter 5-Architecture (under Table 1) states that "... SHALL utilize SIP/IP core from IMS as specified in 3GPP and 3GPP2.
- Optional

- Presence Service Enabler



## 8. Conformance Requirements Notation Details

This section is informative

The ERDEF tables are defined in the following chapters for:

- PoC Client,
- PoC Server performing the Participating PoC Function and,
- PoC Server performing the Controlling PoC Function.

Each ERDEF table identifies a list of supported features as:

**Item:** Identifier for a feature (according to [IOPPROC]).

**Feature/Application:** Short description of the feature labeled in column “Item”.

**Status:** Whether support for the feature is mandatory or optional.

- M means the **Item** is mandatory
- O means the **Item** is optional

“M” is used for mandatory support and “O” for optional support in this column.

**Requirement:** This column identifies other features required by this feature. If no other features are required, this column is left empty.

The ERDEF notation as given in this subclause is consistent with the SCR notation as used in the [POC-CP] and [POC-UP]. The dependency grammar notation to be used in the Requirement column of the ERDEF tables using ABNF [RFC2234] are described as:

TerminalExpression = ScrReference / NOT TerminalExpression / TerminalExpression LogicalOperator  
TerminalExpression / (“ TerminalExpression “)”

ScrReference = ScrItem / ScrGroup

ScrItem = SpecScrName “-“ GroupType “-“ DeviceType “-“ NumericId / SpecScrName “-“ DeviceType “-“  
NumericId

ScrGroup = SpecScrName “:” FeatureType / SpecScrName “-“ GroupType “-“ DeviceType “-“ FeatureType

SpecScrName = 1\*Character;

GroupType = 1\*Character;

DeviceType = “C” / “S”; C – client, S – server

NumericId = Number Number Number

LogicalOperator = “AND” / “OR”; AND has higher precedence than OR and OR is inclusive

FeatureType = “MCF” / “OCF” / “MSF” / “OSF”; See Section A.1.6

Character = %x41-5A ; A-Z

Number = %x30-39 ; 0-9

## 9. ERDEF for PoC - Client Requirements

This section is normative.

Item	Feature / Application	Status	Requirement
OMA-ERDEF-POC-C-001	PoC Client Control Plane	M	PoCCPSpec: MCF
OMA-ERDEF-POC-C-002	PoC Client User Plane	M	PoC_UserPlaneV1: MCF
OMA-ERDEF-POC-C-003	PoC Client Control Plane	O	PoCCPSpec: OCF See NOTE 1
OMA-ERDEF-POC-C-004	PoC Client User Plane	O	PoC_UserPlaneV1: OCF See NOTE 2
<p>NOTE 1: Any, All, or None of the optional requirements may be implemented. If any are implemented, then the dependencies implied in the SCR (appendix F) of [POC-CP] shall be adhered to.</p> <p>NOTE 2: Any, All, or None of the optional requirements may be implemented. If any are implemented, then the dependencies implied in the SCR (appendix A) of [POC-UP] shall be adhered to.</p>			

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

# 10.ERDEF for PoC - Server Requirements

This section is normative.

Item	Feature / Application	Status	Requirement
OMA-ERDEF-POC-S-001	PoC Server: Control Plane: Participating PoC Function	M	PoCCPSpec-PIR: MSF AND PoCCPSpec-PTR: MSF
OMA-ERDEF-POC-S-002	PoC Server: Control Plane: Controlling PoC Function	M	PoCCPSpec-CIR: MSF AND PoCCPSpec-CTR: MSF
OMA-ERDEF-POC-S-003	PoC Server: User Plane: Participating PoC Function	M	PoC_UserPlaneV1-PPR-S- 001:MSF
OMA-ERDEF-POC-S-004	PoC Server: User Plane: Controlling PoC Function	M	PoC_UserPlaneV1-CTR : MSF AND PoC_UserPlaneV1-CTB: MSF AND PoC_UserPlaneV1-CME: MSF AND PoC_UserPlaneV1-CMC: MSF AND PoC_UserPlaneV1-CID: MSF AND PoC_UserPlaneV1-CTI: MSF
OMA-ERDEF-POC-S-005	PoC Server: Control Plane: Participating PoC Function	O	PoCCPSpec : OSF See NOTE 1
OMA-ERDEF-POC-S-006	PoC Server: Control Plane: Controlling PoC Function	O	PoCCPSpec : OSF See NOTE 1
OMA-ERDEF-POC-S-007	PoC Server: User Plane: Participating PoC Function	O	PoC_UserPlaneV1: OSF See NOTE 2
OMA-ERDEF-POC-S-008	PoC Server: User Plane: Controlling PoC Function	O	PoC_UserPlaneV1: OSF See NOTE 2

NOTE 1: all, or none of the optional requirements may be implemented. If any are implemented, then the dependencies implied in the SCR (appendix F) of [POC-CP] shall be adhered to.

NOTE 2: all, or none of the optional requirements may be implemented. If any are implemented, then the dependencies implied in the SCR (appendix A) of [POC-UP] shall be adhered to.

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

## Appendix A. Change History

(Informative)

### A.1 Approved Version History

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

### A.2 Candidate Version 1.0 History

Document Identifier	Date	Sections	Description
Submitted as baseline document in OMA-POC-2004-0769-ERELED-Draft Document Template	04 Oct 2004		Initial version as baseline document
OMA-TS-PoC_ERELED-V1_0	26 Oct 2004	Sec. 1, 2, 3, 5, 7	Including agreed contributions 0785, 0786R01, 0787, 789R01, 791 in POC Interim Meeting from 25 Oct 04
	28 Oct 2004	Sec. 6, 3.2	Including contributions 0920R01, 0790R01 in POC Interim Meeting on 26-28 Oct 04
	29 Oct 2004	Sec. 4, 8, 9	Including contributions 0788R01, 0792R02, 0793R01 in POC Interim Meeting on 28 Oct 04, remove empty appendix
OMA-ERELED-PoC-V1_0	16 Nov 2004	Sec. 8, 9 Sec. 2	Including contribution 1041 in PoC WG Meeting on 16 Nov 04 Updating document naming as agreed on mailing list. Document title redefined from OMA-TS-PoC_ERELED-V1_0-20041116-D to OMA-ERELED-PoC-V1_0-20041116-D
	17 Nov 2004	Sec. 3.2	Including contributions 1052R01 in PoC WG meeting on 17 Nov 04 for definition lists; minor editorial updates.
	12 Jan 2005	All	Include all editorial /technical comments from consistency review and agreed discussion as editorial update (as of POC Interim Meeting #17, 12 Jan2005)
	13 Jan 2005	Sec. 8,9	Include contributions 2005-0064, 2005-0072 in POC Interim Meeting #17 on 10-13 Jan 2005
	17 Jan 2005	Sec. 9	Check reference in table as included from 2005-0072 in POC#17 meeting
	31 Jan 2005	Sec. 7	Include contribution 2005-0162R01 in PoC WG Meeting #18 on 31-Jan-05
	01 Feb 2005	Sec.3.2	Include contribution 2005-0132R01 in PoC WG Meeting#18 on 01-Feb-05
	02 Feb 2005	All	Final Review, PoC Meeting#18 on 01-Feb-2005
	Candidate Version OMA-ERELED-POC-V1_0	17 Feb 2005	
29 Mar 2005			PoC RD updated - Correcting the application of : OMA-TP-2005-0073-LATE-Changes-to-the-PoC-RD

Document Identifier	Date	Sections	Description
	29 Apr 2005		Level 2 and level 3 change requests as follows: AD: OMA-POC-2005-0341, OMA-POC-2005-0346, OMA-POC-2005-0412R01, OMA-POC-2005- 0413R01, OMA-POC-2005-0364R01 CP: OMA-POC-2005-0347, OMA-POC-2005-0349, OMA-POC-2005-0351R01, OMA-POC-2005-0352, OMA-POC-2005-0353, OMA-POC-2005-0354, OMA-POC-2005-0356, OMA-POC-2005-0357R01, OMA-POC-2005-0359R01, OMA-POC-2005-0360R01, OMA-POC-2005-0361R01, OMA-POC-2005-0365R01, OMA-POC-2005-0367R02, OMA-POC-2005-0368R02, OMA-POC-2005-0369, OMA-POC-2005-0371R01, OMA-POC-2005-0375, OMA-POC-2005-0377R01, OMA-POC-2005-0378R01, OMA-POC-2005-0379R02, OMA-POC-2005-0380R01, OMA-POC-2005-0379R02, OMA-POC-2005-0380R01, OMA-POC-2005-0381R01, OMA-POC-2005-0382R01, OMA-POC-2005-0384R01, OMA-POC-2005-0400R01, OMA-POC-2005-0402R01, OMA-POC-2005-0403R01, OMA-POC-2005-0404, OMA-POC-2005-0406, OMA-POC-2005-0407, OMA-POC-2005-0410R01 Removal of automatically word generated links OMA-POC-2005-0418R02, OMA-POC-2005-0419R03 UP: OMA-POC-2005-0342R03, OMA-POC-2005-0363, OMA-POC-2005-0366R01, OMA-POC-2005-0373R01, OMA-POC-2005-0374R01, OMA-POC-2005-0376R02, OMA-POC-2005-0401R01 OMA-POC-2005-0416R02 XDM: OMA-POC-2005-0343, OMA-POC-2005-0399R02, OMA-POC-2005-0420

Document Identifier	Date	Sections	Description
	01 Aug 2005	A.2	No change to ERELD. Class 2 & 3 CRs agreed against : OMA-TS-PoC-ControlPlane-V1_0-20050801-C OMA-AD-PoC-V1_0-20050801-C OMA-TS_PoC-UserPlane-V1_0-20050801-C OMA-ETR-PoC-V1_0-20050801-D OMA-TS_PoC-UserPlane-V1_0-20050801-C
	06 Oct 2005	A.2	No change to ERELD. Class 2 & 3 CRs agreed against : OMA-TS-PoC-ControlPlane-V1_0-20051006-C OMA-AD-PoC-V1_0-20051006-C OMA-TS_PoC-UserPlane-V1_0-20051006-C OMA-ETR-PoC-V1_0-20051006-C
	04 Nov 2005	All	Editorial updates agreed in OMA-POC-2005-0690 Class 2 & 3 CRs agreed against: OMA-TS-PoC-ControlPlane-V1_0-20051104-C OMA-AD-PoC-V1_0-20051104-C OMA-TS_PoC-UserPlane-V1_0-20051104-C OMA-ETR-PoC-V1_0-20051104-C OMA-TS-PoC-XDM-V1_0-20051104-C
	27 Jan 2006	All	Convert ERELD to new template Class 2 & 3 CRs agreed against: OMA-TS-PoC-ControlPlane-V1_0-20060127-C OMA-AD-PoC-V1_0-20060127-C OMA-TS_PoC-UserPlane-V1_0-20060127-C OMA-TS-PoC-XDM-V1_0-20060127-C