

# **Enabler Test Requirements for Push to talk over Cellular**

Candidate Version 1.0 – 06 Oct 2005

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# 1. Scope

The Enabler Test Requirements (ETR) document for the Enabler under consideration is created and maintained by the Technical Working Group (TWG) responsible for the technical specifications for the corresponding Enabler.

The ETR document is intended to cover at least those requirements collected in the Requirements Document (RD) and the Architecture Document (AD) in addition to any other items the TWG has identified as important enough to warrant attention from interoperability perspective and identify any technical functionalities that should be covered by testing.

### 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/

[RFC2119] "Key words for use in RFCs to Indicate Requirement Levels", S. Bradner, March 1997,

URL:http://www.ietf.org/rfc/rfc2119.txt

[ERELD] "Enabler Release Document for Push to Talk over Cellular Requirement", Open Mobile

Alliance™, OMA-ERELD-PoC-V1 0, URL:http://www.openmobilealliance.org/

[OMA-PoC-RD] "Push to Talk over Cellular Requirements", Version 1.1, Open Mobile Alliance™, OMA-

RD\_PoC-V1\_0, URL:http://www.openmobilealliance.org/

[OMA-PoC-AD] "Push to Talk over Cellular Architecture", Version 1.1, Open Mobile Alliance™, OMA-

AD PoC-V1 0, URL:http://www.openmobilealliance.org/

[OMA-PoC-CP] "Push to Talk over Cellular Control Plane", Version 1.1, Open Mobile Alliance™, OMA-

CP PoC-V1 0, URL:http://www.openmobilealliance.org/

[OMA-PoC-UP] "Push to Talk over Cellular User Plane", Version 1.1, Open Mobile Alliance™, OMA-

UP PoC-V1 0, URL:http://www.openmobilealliance.org/

[OMA-GM] "Group Management Requirements/Architecture/Specifications", Version 1.1, Open Mobile

Alliance™, OMA-ERELD XDM-V1 0, URL:http://www.openmobilealliance.org/

[OMA-PR] "Presence Requirements/Architecture/Specifications", Version 1.1, Open Mobile Alliance<sup>TM</sup>,

OMA-ERELD-Presence-V1\_0, URL:http://www.openmobilealliance.org/

[OMA-DM] "Device Management/Architecture/Specifications", Version 1.1, Open Mobile Alliance<sup>TM</sup>,

OMA-ERELD-SyncML\_DM-V1\_1, URL:http://www.openmobilealliance.org/

[OMA-XDM-Spec] "XML Document Management (XDM) Specification", Version 1.0, Open Mobile Alliance<sup>TM</sup>,

OMA-TS-XDM Core-V1 0, URL:http://www.openmobilealliance.org/

[OMA-PoC-XDM] "PoC XDM Specification", Version 1.0, Open Mobile Alliance™, OMA-TS-POC\_XDM-

V1 0, URL:http://www.openmobilealliance.org/

### 2.2 Informative References

[OMADICT] "Dictionary for OMA Specifications", Open Mobile Alliance™. OMA-Dictionary,

URL:http://www.openmobilealliance.org/

## 3. Terminology and Conventions

#### 3.1 Conventions

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

All clauses and appendixes, except "Scope" and "Introduction", are normative, unless they are explicitly indicated to be informative.

### 3.2 Definitions

**Test fest** Multi-lateral interoperability testing event

**1-1 PoC Session** A feature enabling a PoC User to establish a PoC Session with another PoC User

1-many-1 Session A PoC Group Session for a Pre-arranged PoC Group in which one participant is a Distinguished

Participant and each other participant is an Ordinary Participant.

Ad-hoc PoC Group 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.

Answer Mode The Answer Mode Indication is the current Answer Mode PoC service setting of the PoC Client.

**Automatic Answer Mode** 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.

**Chat PoC Group** 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.

**Chat PoC Group Session** A Chat PoC Group Session is a PoC Session established to a Chat PoC Group.

**Confirmed Indication** 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.

Control Plane 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.

**Conversation** 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.

**Distinguished**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.

**Group** 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.

**Group Advertisement** A Group Advertisement is a feature that provides the capability to inform other PoC Users of the existence

of a PoC Group.

**Incoming PoC Session** 

Barring

**Participant** 

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.

Instant Personal Alert 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.

**Invited PoC Client** An Invited PoC Client is a PoC Client that is invited to a PoC Session.

Inviting PoC Client An Inviting PoC Client is a PoC Client that invites other PoC User(s) to a PoC Session.

Manual Answer Mode 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.

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.

**On-demand Session** An On-Demand Session is a PoC Session set-up mechanism in which all Media Parameters are negotiated

at PoC Session establishment.

**Ordinary Participant** 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.

**Participant** A Participant is a PoC User in a PoC Session.

**Participating PoC** Function

The Participating PoC Function is implemented in a PoC Server, and provides PoC Session handling, 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.

**PoC Client** A PoC Client is a PoC functional entity that resides on the PoC User Equipment that supports the PoC

service.PoC service

PoC Group A PoC Group is a predefined set of PoC Users together with its attributes. A PoC Group is identified by a

SIP URI

**PoC Group Identity** The PoC Group Identity is a SIP URI of the Pre-arranged PoC Group or Chat PoC Group.

**PoC Group Session** A PoC Group Session is a Pre-arranged PoC Group, Ad-hoc PoC Group or Chat PoC Group Session.

The PoC Server implements the 3GPP IMS and 3GPP2 MMD application level network functionality for PoC Server

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.

PoC Session A PoC Session is a SIP ession 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.

**PoC Subscriber** 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].

PoC User 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].

Pre-arranged PoC

Group

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.

**Pre-established Session** 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.

The Primary PoC Session is a PoC Session that the PoC User selects in preference to other PoC Sessions. **Primary PoC Session** 

When the user has Simultaneous PoC Sessions, the Primary PoC Session has a priority over Secondary

PoC Sessions.

Secondary PoC Session 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.

Simultaneous PoC

Session

When a PoC User is a Participant in more then one PoC Session simultaneously using the same PoC

Client

Talk Burst A Talk Burst is the flow of media from a PoC Client while that has the permission to send media.

**Talk Burst Control** 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].

**Talker Identification** Talker Identification is the procedure by which the current talker's identity is determined and made known to listeners on the PoC Session.

**Unconfirmed Indication** 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.

User A User is any entity that uses the described features through the User Equipment.

**User Equipment** User Equipment is a hardware device that supports a PoC Client e.g., a wireless phone.

User Plane 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

AD Architecture Document

RD Requirements Document

OMA Open Mobile Alliance

CDR Charging Data Record

MS-ISDN Mobile Station ISDN Number

PoC Push to talk over Cellular

SIP Session Initiation Protocol

URT Universal Resource Identifier

XDMC XML Document Management Client
XDMS XML Document Management Server

### 4. Introduction

The purpose of this Enabler Test Requirements document is to help and guide the testing effort for the Enabler Push to talk over Cellular V1 0, documenting those areas where testing is most important to ensure interoperability of implementations.

The Enabler under consideration comprises the following specifications:

- OMA-TS-PoC-ControlPlane-V1 0-20050317-C: Specifying the Control Plane.
- OMA-TS-PoC-UserPlane-V1 0-20050317-C: Specifying the User Plane.

Generally, the testing activity should aim at validating the normal working behavior of the client/server interactions, as well as testing the error conditions whenever it is possible to set up the appropriate scenarios. The following clauses provide more detailed description of the testing requirements for Push to talk over Cellular V1 0.

This document also intends to provide some guidance on the prioritization of the specifications and features to be tested within Enabler Push to talk over Cellular V1\_0.

## 5. Test Requirements

### 5.1 Enabler Test Requirements

The test requirements collected in this clause are related to the Enabler Push to talk over Cellular – V1.0.

Following generic requirements are identified for the Enabler:

- The enabler functionality includes various alternatives for the originating and terminating terminal configuration. At the originating side the terminal may use Pre-established or On-demand Session, confirmed or unconfirmed indication, and at the terminating side the terminal may use Pre-established or On-demand Session and Automatic or Manual Answer Mode. It is required that different variations are covered in the test specification (at adequate level).
- The architecture of test configuration is described
- Test cases should be defined in a way that the same test can be executed in one operator network (intra-operator test case) or using NNI interface (inter-operator test case).

The requirements in this clause are listed in the assumption that the test environment fulfills all the dependencies described in subclause 5.3 "Enabler Dependencies".

### 5.1.1 Mandatory Test Requirements

#### 5.1.1.1 Registration

| MANDA'       | TORY FEATURES                        | TEST REQUIREMENTS                             |
|--------------|--------------------------------------|---|
| NORMAL FLOW  | [01]: Registration (AD 8.5/CP 6.1.1) | Verify that registration is done properly.    |
| NORWIAL FLOW | [02]: De-Registration (CP 6.1.1)     | Verify that de-registration is done properly. |
| ERROR FLOW   |                                      |   |

**Table 1: Mandatory Test Requirements for Registration** 

#### 5.1.1.2 PoC Session Initiation, Joining and Release

| MANDATOR    | Y FEATURES  | TEST REQUIREMENTS   |
|-------------|---|---|
| NORMAL FLOW | [01]: On-demand Session<br>establishment: Ad-hoc PoC Group<br>Session - Confirmed Indication (AD<br>9.2, CP 6.1.3.3.1, 7.2.1.2). Invited<br>PoC Client Automatic Answer Mode.<br>(NOTE)     | Verify that Ad-hoc PoC Group<br>Session is properly established on<br>demand and the inviting PoC Client<br>can get a permission to speak<br>indication when the first invited PoC<br>Client accepts the session.       |
|             | [02]: On-demand Session<br>establishment: 1-1 PoC Session -<br>Confirmed Indication (AD 9.2/CP<br>6.1.3.3.1, 6.2.1.2) Invited PoC Client<br>Automatic Answer Mode. (NOTE)                   | Verify that 1-1 PoC Session is properly established on demand and the inviting PoC Client can get a permission to speak indication when the invited PoC Client accepts the session.                                     |
|             | [03]: On-demand Session<br>establishment: Pre-arranged PoC<br>Group Session - Confirmed Indication<br>(AD 9.3/CP 6.1.3.3.2, 6.2.1.2) Invited<br>PoC Client Automatic Answer Mode.<br>(NOTE) | Verify that Pre-arranged PoC Group<br>Session is properly established on<br>demand and the inviting PoC Client<br>can get a permission to speak<br>indication when the first invited PoC<br>Client accepts the session. |

| [04]: On-demand Session establishment: Ad-hoc PoC Group Session (AD 9.2/CP 6.1.3.3.1, 6.2.1.3) - Invited PoC Client Manual Answer Mode.  [05]: On-demand Session establishment: 1-1 PoC Session (AD 9.2/CP 6.1.3.3.1, 6.2.1.3) - Invited PoC Client Manual Answer Mode. | Verify that Ad-hoc PoC Group session is properly established on demand and the invited PoC Client(s) alert. The inviting PoC Client can get a permission to speak indication when the first invited PoC user accepts the session.  Verify that 1-1 PoC Session is properly established on demand and the invited PoC Client alerts. The inviting PoC Client can get a permission to speak indication when the invited PoC user accepts the |
|---|--|
| [06]: On-demand Session<br>establishment: Pre-arranged PoC<br>Group Session (AD 9.3/CP 6.1.3.3,<br>6.2.1.3) - Invited PoC Client Manual<br>Answer Mode.   | session.  Verify that Pre-arranged PoC Group Session is properly established on demand and the invited PoC Client(s) alert. The inviting PoC Client can get a permission to speak indication when the first invited PoC user accepts the session.  |
| [07]: Treatment of session initiation in 1-1 PoC Session if Invited PoC User's access policy indicates that invitations from Inviting PoC User are to be rejected (i.e. <allow-invite> action has value "reject") (AD 8.18/CP 7.3.2.2)</allow-invite>                   | Verify that the inviting PoC user's session request is rejected and the inviting PoC user can get an error message of the rejected invitations.  |
| [08]: Treatment of session initiation in 1-1 PoC Session if Incoming PoC Session Barring is active (AD 8.18/CP 7.3.2.2)   | Verify that the inviting PoC user's request is rejected and the inviting PoC user can get an error message of the barred invitations.  |
| [09]: Leaving PoC Session in on-<br>Demand Session (AD 9.5.1/CP<br>6.1.6.1)   | Verify that PoC Client is able to leave<br>On-demand PoC Session properly.   |
| [10]: Removing PoC Participant from PoC Session by PoC Server. (RD 6.1.5.5/CP 7.2.2.4)  | Verify that PoC Participant can be properly removed from PoC Session.  |
| [11]: Re-joining PoC Session in Ondemand Session (AD 9.6.1/CP 6.1.5.1)  | Verify that PoC Client is able to rejoin on-demand Session properly.   |
| [12]: Adding PoC User to PoC<br>Session: invited PoC User in Manual<br>Answer Mode (AD 9.7/CP 6.1.7,<br>7.2.1.8).   | Verify that a new PoC User can be properly added to the existing session.  |
| [13]: Adding PoC user to PoC<br>Session: invited PoC user in<br>Automatic Answer Mode (AD 9.7/CP<br>6.1.7, 7.2.1.8).  | Verify that a new PoC user can be properly added to the existing PoC Session.  |
| [14]: Joining PoC Chat Session (AD 9.4/CP 6.1.3.3.2, 7.2.1.5)   | Verify that the PoC Client is able to join the Chat PoC Group Session.   |
| [15]: PoC Session release upon the last Participant leaving the Chat Group Session (CP 7.2.1.16).   | Verify that PoC Session is released<br>when the last Participant leaves the<br>session. This can be verified by trying<br>the rejoining the PoC Session resulted   |

|            |   | in error.  |
|------------|---|--|
|            | [16]: PoC Session release upon the second last Participant leaving the Prearranged PoC or Ad-hoc PoC Group Session. (CP 7.2.1.16).  | Verify that PoC Session is released<br>when the second last Participant<br>leaves the session  |
|            | [17]: Pre-arranged PoC Session release upon the initiator leaving the session (CP 7.2.1.16).  | Verify that PoC Session can be released when the initiator leaves the session  |
|            | [18]: PoC Session release after the PoC Session has lasted longer than the pre-defined time (CP 7.2.1.16).  | Verify that PoC Session can be released based on maximum PoC Session length.   |
|            | [19]: PoC Session release after predefined time period of no Talk Burst (UP 9.1)  | Verify that PoC Session can be released after pre-defined inactivity time period.  |
|            | [20]: Identity Information of Inviting PoC User in all session modes  Identity information of Inviting user to invited party(ies) (RD 6.1.4.3)  | Verify that the invited party can receive the identity information of the Inviting PoC User when privacy is not indicated in the PoC session       |
|            | [21]: Group Identity in Pre-arranged PoC Group  Identity for Groups to be used to address the Group and initiate session (RD 6.1.9.5/CP 6.1.3.2.3/CP 6.1.3.3.3)   | Verify that the Group can be addressed and the PoC Group Session can be initiated using the PoC Group Identity.                                    |
|            | [22]: Adding a PoC user - Notification: in Ad-hoc PoC Group, Pre-arranged PoC Group. Notification of result of invitation of the invited PoC subscriber (RD 6.1.5.6/CP 6.1.7)                                       | Verify that the notification about the result of the invitation of the Invited PoC User is received (accepted, rejected invitation, unavailable)   |
|            | [23]: Adding a PoC User - Floor<br>Status Information:<br>Floor Status information to Invited<br>PoC User after session acceptance<br>(RD 6.1.5.6/UP 6.3.4)   | Verify that the information about the status of the floor is received by the added PoC User.   |
|            | [24]: Policy based adding: PoC Client can add PoC User(s) to a PoC Session, when allowed by the adding policy (CP 7.2.1.15).  | Verify that a PoC User is added to a PoC Session upon pre-defined policy if allowed.   |
|            | [25]: Policy-based release:<br>Termination of PoC Session based on<br>pre-defined policy (RD 6.1.6,<br>6.1.9.3/CP 7.2.1.16)   | Verify that the PoC Session is released<br>upon request based on pre-defined<br>policy and Participants are removed<br>and re-joining is rejected. |
| ERROR FLOW | [01]: Notification if PoC Session is not established (RD 6.1.4.2.1, 6.1.4.2.2/CP 7.2.1)   | Verify that the notification is received when PoC Session is not established (no answer of invited Participants).                                  |
|            | [02]: Reject session establishment if inviting PoC User is not allowed to initiate the Pre-arranged PoC Group Session (i.e. not authorized by the <allow-initiate-conference> action of</allow-initiate-conference> | Verify that the inviting PoC User's session request is rejected and the PoC User receives an error message.  |

| the PoC Group document) (RD 6.1.4.2.1/CP 7.2.1.3)  |  |
|--|--|
| [03]: Reject (re-)joining request if maximum number of Participants is reached and inform (re-) joining user (RD 6.1.4.2.1, 6.1.4.2.2, 6.1.4.4; 6.1.5.2)   | Verify that the (re-)joining PoC User's session request is rejected and the PoC User receives an error message.                              |
| [04]: Reject rejoining request if session is closed/or does not exist/is released and inform re-joining user (RD 6.1.4.2.1, 6.1.4.2.2, 6.1.4.4, 6.1.5.6, 6.1.6/CP 7.2.1.4)                                 | Verify that the (re-)joining PoC User's session request is rejected and the PoC User receives an error message.                              |
| [05]: Reject if not re-joining into same<br>Ad-hoc PoC Group Session (RD<br>6.1.2/CP 7.2.1.6)  | Verify that the (re-)joining PoC User's session request is rejected and the PoC User receives an error message.                              |
| [06]: Reject request to join Prearranged PoC Group if joining PoC User is not allowed (i.e. <joinhandling> action has value "reject") and inform joining use (RD 6.1.2/CP 7.2.1.6)</joinhandling>          | Verify that the joining PoC user's session request is rejected and the PoC User receives an error message.                                   |
| [07]: Reject request to join Restricted Chat PoC Group if joining PoC User is not allowed (i.e. <join-handling> action has value "reject") and inform joining user (RD 6.1.4.4/CP 7.2.1.6)</join-handling> | Verify that the joining PoC User's session request is rejected and the PoC User receives an error message.                                   |
| [08]: Reject invitation request if maximum number of Participants is reached in the Ad-hoc PoC Group (RD 6.1.5.6)  | Verify that the inviting PoC User's session request is rejected and the PoC User receives an error message.                                  |
| [09]: PoC Client not available during session setup  | Verify that the event is detected, the involving entities release the relevant resources and transit to the initial state in this procedure. |
| [10]: Connection between PoC<br>Servers torn down during session<br>setup  | Verify that the event is detected, the involving entities release the relevant resources and transit to the initial state in this procedure. |

Table 2: Mandatory Test Requirements for PoC Session Initiation, Joining and Release

NOTE: The test cases [01], [02] and [03] cannot be tested if the Controlling PoC Function supports the optional functionality of unconfirmed indication.

#### 5.1.1.3 PoC Session-unrelated Features

| MANDATO     | RY FEATURES  | TEST REQUIREMENTS   |
|-------------|--|---|
|             | [01]: Privacy requested by PoC User (AD 8.8/CP 6.1.3.1)    | Verify that privacy request is properly handled.              |
| NORMAL FLOW | [02]: Sending of PoC Alert (RD 6.1.3/AD 9.9.1 /CP 6.1.8).  | Verify that PoC Client is able to send PoC Alert messages.    |
|             | [03]: Receiving of PoC Alert (RD 6.1.3/AD 9.9.2/CP 6.2.4). | Verify that PoC Client is able to receive PoC Alert messages. |

| ERROR FLOW |  |
|------------|--|
|------------|--|

**Table 4: Mandatory Test Requirements for PoC Session-unrelated Features** 

#### 5.1.1.4 Talk Burst Control (no queuing)

| MANDATOI    | RY FEATURES  | TEST REQUIREMENTS   |
|-------------|--|---|
| NORMAL FLOW | [01]: Talk Burst request during a session (AD 9.13/UP 6.2.5, 6.3.4, 6.4.3):  Request when floor is idle -> Talk Burst granted    | Verify that Talk Burst is granted to the requesting PoC Client when floor is idle and Talk Burst taken is sent to all other Participants. |
|             | [02]: Talk Burst request during a session (AD 9.13/UP 6.2.5, 6.3.4, 6.4.3):  | Verify that Talk Burst is denied when floor is not idle.  |
|             | Request when floor is not idle -> Talk<br>Burst deny   |   |
|             | [03]: Implicit Talk Burst request (INVITE) in the beginning of a 1-1 PoC Session (AD 9.13/UP 6.2.5, 6.3.4, 6.4.3):               | Verify that Talk Burst is granted to the requesting PoC Client when floor is idle and Talk Burst taken is sent to all other Participants. |
|             | Request when floor is idle -> Talk<br>Burst granted  |   |
|             | [04]: Implicit Talk Burst request (INVITE) in the beginning of an Adhoc PoC Group Session (AD 9.13/UP 6.2.5, 6.3.4, 6.4.3):      | Verify that Talk Burst is granted to the requesting PoC Client when floor is idle and Talk Burst taken is sent to all other Participants. |
|             | Request when floor is idle -> Talk<br>Burst granted  |   |
|             | [05]: Implicit Talk Burst request (INVITE) in the beginning of a Prearranged PoC Group Session (AD 9.13/UP 6.2.5, 6.3.4, 6.4.3): | Verify that Talk Burst is granted to the requesting PoC Client when floor is idle and Talk Burst taken is sent to all other Participants. |
|             | Request when floor is idle -> Talk<br>Burst granted  |   |
|             | [06]: Implicit Talk Burst request (INVITE) when re-joining an Ad-hoc PoC Group Session (AD 9.13/UP 6.2.5, 6.3.4, 6.4.3):         | Verify that Talk Burst is granted to the requesting PoC Client when floor is idle and Talk Burst taken is sent to all other Participants. |
|             | Request when floor is idle -> Talk<br>Burst granted  |   |
|             | [07]: Implicit Talk Burst request (INVITE) when re-joining a Prearranged PoC Group Session (AD 9.13/UP 6.2.5, 6.3.4, 6.4.3):     | Verify that Talk Burst is granted to the requesting PoC Client when floor is idle and Talk Burst taken is sent to all other Participants. |
|             | Request when floor is idle -> Talk<br>Burst granted  |   |
|             | [08]: Implicit Talk Burst request (INVITE) when joining a Chat PoC Group Session (AD 9.13/UP 6.2.5, 6.3.4, 6.4.3):               | Verify that Talk Burst is granted to the requesting PoC Client when floor is idle and Talk Burst taken is sent to all other Participants. |

|            | Request when floor is idle -> Talk<br>Burst granted   |   |
|------------|---|---|
|            | [09]: Implicit Talk Burst request<br>(INVITE) when re-joining an Ad-hoc<br>PoC Group Session (AD 9.13/UP<br>6.2.5, 6.3.4, 6.4.3): | Verify that Talk Burst is denied when floor is not idle.  |
|            | Request when floor is not idle -> Talk<br>Burst denied  |   |
|            | [10]: Implicit Talk Burst request (INVITE) when re-joining a Prearranged PoC Group Session (AD 9.13/UP 6.2.5, 6.3.4, 6.4.3):      | Verify that Talk Burst is denied when floor is not idle.  |
|            | Request when floor is not idle -> Talk<br>Burst denied  |   |
|            | [11]: Implicit Talk Burst request (INVITE) when joining a Chat PoC Group Session (AD 9.13/UP 6.2.5, 6.3.4, 6.4.3):                | Verify that Talk Burst is denied when floor is not idle.  |
|            | Request when floor is not idle -> Talk Burst denied.  |   |
|            | [12]: Talk Burst release (AD 9.13.1/UP 6.5.5)   | Verify that Talk Burst idle indication is sent to all Participants when floor becomes idle.   |
|            | [13]: Talk Burst revoke (AD 9.13.1/UP 6.5.8)  | Verify that Talk Burst revoke indication is sent to the talking PoC Client and Talk Burst idle to all other Participants when floor is revoked. |
|            | [01]: Talk Burst request not received<br>by PoC Server  | Verify that the event is detected, the involving entities release the relevant resources and transit to the initial state in this procedure.    |
| ERROR FLOW | [02]: Talk Burst control (granted or deny) not received by PoC Client (AD 9.13/UP 6.2.5, 6.3.4, 6.4.3)                            | Verify that the event is detected, the involving entities release the relevant resources and transit to the initial state in this procedure.    |
|            | [03]: Talk Burst release not received<br>by PoC Server (AD 9.13/UP 6.2.5,<br>6.3.4, 6.4.3).                                       | Verify that the event is detected, the involving entities release the relevant resources and transit to the initial state in this procedure.    |

Table 5: Mandatory Test Requirements for Talk Burst Control (no queuing)

#### **5.1.1.5** XDM for PoC

| MANDATORY FEATURES | TEST REQUIREMENTS |
|--------------------|-------------------|
|--------------------|-------------------|

|               | [01]: Basic functions of PoC XDMC ([OMA-PoC-XDM], section 5.1)  | <ul> <li>a) Verify the PoC XDMC supports implementation of the "users" tree segment.</li> <li>b) Verify each PoC user is able to define multiple PoC Group documents</li> <li>c) Verify each PoC user is able to define the PoC User Access Policy</li> </ul> |
|---------------|---|---|
|               | [02]: Conference URI negotiation ([OMA-PoC-XDM], section 5.1.5)   | a) Verify the XDMC is able to propose a Conference URI when creating a PoC Group document.  |
|               |   | b) Verify the PoC XDMS is able to validate that the conference URI is unique and that the conference URI conforms to a local policy.  |
|               | [03]: Support of PoC group structure ([OMA-PoC-XDM], section 5.1)   | Verify the PoC client and server both are able to support the PoC Group document that is conform to the structure of the "list-service" document defined in section 5.1.1 of [OMA-PoC-XDM], and also the others in following:                                 |
|               |   | Application Unique ID   |
|               |   | XML Schema  |
| NORMAL FLOW   |   | MIME type   |
| TOTALLE I BOW |   | Validation constraints  |
|               |   | Data Semantics  |
|               |   | Naming conventions  |
|               |   | Global documents  |
|               |   | Resource interdependency  |
|               |   | Authorization policies  |
|               | [04]: PoC User Access Policy ([OMA-PoC-XDM], section 5.2)   | Verify the PoC client and server both<br>are able to support the PoC User<br>Access Policy structure of the<br>"ruleset" document, and also the<br>others in following:   |
|               |   | Application Unique ID   |
|               |   | XML Schema  |
|               |   | MIME type   |
|               |   | Data Semantics  |
|               |   | Naming conventions  |
|               |   | Global documents  |
|               |   | Resource interdependency  |
|               |   | Authorization policies  |
|               | [05]: Common function ([POC-XDM-Spec] section 5.1)  | Verify that the PoC XDMS implement the "users" tree segment.  |
| ERROR FLOW    | [01]: Conference URI is not unique or does not conform to the local policy ([OMA-PoC-XDM], section 5.1.5) | Verify the PoC XDMS is able to respond with an HTTP "409 Conflict" with the following clarifications  |

| a) Verify the response includes the "uniqueness-failure" error element                                 |
|--|
| b) Verify the XDMS generate a correct conference URI according to the local policy                     |
| c) Verify the "exists" element include the "alt-value" element containing the generated conference URI |

Table 6: Mandatory Test Requirements for XDM for PoC

## 5.1.2 Optional Test Requirements

#### 5.1.2.1 PoC Session Initiation, Joining and Release

| OPTIONAL    | FEATURES   | TEST REQUIREMENTS  |
|-------------|--|--|
| NORMAL FLOW | [01]: Pre-established Session establishment (AD 9.1/CP 6.1.5.2, 7.3.1.2)   | Verify that Pre-established Session is properly established.   |
|             | [02]: Ad-hoc PoC Group Session<br>establishment (Pre-established<br>Session) - Confirmed Indication (AD<br>9.2.1.3/CP 6.1.3.2)                       | Verify that Ad-hoc PoC Group<br>Session is properly established and the<br>inviting PoC Client can get a<br>permission to speak indication when<br>the first Invited PoC Client accepts the<br>session.  |
|             | [03]: 1-1 PoC Session establishment:<br>(Pre-established Session) - Confirmed<br>Indication (AD 9.2.1.3/CP 6.1.3.2)                                  | Verify that 1-1 PoC Session is properly established and the Inviting PoC Client can get a permission to speak indication when the Invited PoC Client accepts the session.  |
|             | [04]: Ad-hoc PoC Group Session<br>establishment (Pre-established<br>Session)- Invited PoC Client<br>Automatic Answer Mode (AD<br>9.2.2.2/CP 6.1.3.2) | Verify that Ad-hoc PoC Group<br>Session is properly established and the<br>invitation is automatically answered.<br>The Inviting PoC Client can get a<br>permission to speak indication when<br>the first Invited PoC Client accepts the<br>session. |
|             | [05]: 1-1 PoC Session establishment<br>(Pre-established Session) - Invited<br>PoC Client Automatic Answer Mode<br>(AD 9.2.2.2/CP 6.1.3.2)            | Verify that 1-1 PoC Session is properly established and the invitation is automatically answered. The Inviting PoC Client can get a permission to speak indication when the Invited PoC Client accepts the session.                                  |
|             | [06]: Ad-hoc PoC Group Session<br>establishment (Pre-established<br>Session) - Invited PoC Client Manual<br>Answer Mode (AD 9.2.2.3/CP 6.1.3.2)      | Verify that Ad-hoc PoC Session is properly established and the Invited PoC Client(s) alert. The Inviting PoC Client can get a permission to speak indication when the first Invited PoC User accepts the session.                                    |
|             | [07]: 1-1 PoC Session establishment<br>(Pre-established Session) - Invited<br>PoC Client Manual Answer Mode<br>(AD 9.2.2.3/CP 6.1.3.2)               | Verify that 1-1 PoC Session is<br>properly established and the Invited<br>PoC Client(s) alert. The Inviting PoC<br>Client can get a permission to speak  |

|   | indication when the invited PoC User accepts the session.   |
|---|---|
| [08]: Ad-hoc PoC Group Session establishment (Pre-established Session) - Unconfirmed Indication (the invited PoC User(s) has Automatic Answer Mode ) (AD 9.2.1.4, 9.2.2.3/CP 6.1.3.2)                   | Verify that Ad-hoc PoC Group Session is properly established and Unconfirmed Indication is sent to the Inviting PoC Client before Invited PoC Client accepts the invitation. The Inviting PoC Client can get a permission to speak indication.                                      |
| [09]: 1-1 PoC Session establishment (Pre-established Session) - Unconfirmed Indication (the invited PoC User(s) has Automatic Answer Mode ) (RD 6.1.4.1/AD 9.2.1.4, 9.2.2.2/CP 6.1.3.2)                 | Verify that 1-1 PoC Session is properly established and Unconfirmed Indication is sent to the Inviting PoC Client before Invited PoC Client accepts the invitation. The Inviting PoC Client can get a permission to speak indication.   |
| [10]: On-demand Session<br>establishment: Ad-hoc PoC Group<br>Session - Unconfirmed Indication (the<br>invited PoC User(s) has Automatic<br>Answer Mode ) (AD 9.2.1.2,<br>9.2.2.1/CP 6.1.3.2.1)         | Verify that Ad-hoc PoC Group Session is properly established on demand and Unconfirmed Indication is sent to the Inviting PoC Client before Invited PoC Client accepts the invitation. The Inviting PoC Client can get a permission to speak indication.                            |
| [11]: On-demand Session<br>establishment: 1-1 PoC Session -<br>Unconfirmed Indication (the invited<br>PoC User(s) has Automatic Answer<br>Mode ) (AD 9.2.1.2, 9.2.2.1/CP<br>6.1.3.2.1)                  | Verify that 1-1 PoC Session is properly established on demand and Unconfirmed Indication is sent to the Inviting PoC Client before Invited PoC Client accepts the invitation. The Inviting PoC Client can get a permission to speak indication.                                     |
| [12]: On-demand Session<br>establishment: Pre-arranged PoC<br>Group Session - Unconfirmed<br>Indication (the invited PoC User(s)<br>has Automatic Answer Mode ) (RD<br>6.1.4.1/AD 9.3.1.2/CP 6.1.3.2.2) | Verify that Pre-arranged PoC Group<br>Session is properly established on<br>demand and Unconfirmed Indication<br>is sent to the Inviting PoC Client<br>before Invited PoC Client accepts the<br>invitation. The Inviting PoC Client<br>can get a permission to speak<br>indication. |
| [13]: Pre-arranged PoC Group Session establishment (Pre-established Session) - Confirmed Indication (AD 9.3.1.4/CP)   | Verify that Pre-arranged PoC Group<br>Session is properly established and the<br>Inviting PoC Client can get a<br>permission to speak indication when<br>the first Invited PoC Client accepts the<br>session.   |
| [14]: Re-joining a PoC Session in Pre-<br>established Session (AD 9.6.2/CP)   | Verify that PoC Client is able to rejoin an Ad-hoc Group Session (using Pre-established Session) properly.  |
| [15]: Leaving PoC Session in Preestablished Session (AD 9.5.2/CP).  | Verify that PoC Client is able to leave from Pre-established Session properly.  |
| [16]: Manual answer override (AD 9.2.2.4, 9.3.2.2.2)  | Verify that Invited PoC Client is not<br>alerting but Automatic Answer Mode<br>is applied when Inviting PoC User is   |

|            |   | using manual answer override feature<br>and the Invited PoC User has<br>authorized the Inviting PoC User to<br>use manual answer override in PoC<br>Session invitation. |
|------------|---|---|
|            | [17]: Participant Information of adding user for all PoC Group modes  | Verify that notification of identities of Participants to the added user is   |
|            | Notification of identities of<br>Participants to the added user if<br>permitted (RD 6.1.5.6)                | handled based on privacy settings.  |
|            | [18]: Inviting PoC User requests that Manual Answer Mode be required at the Invited PoC Client (CP 7.3.2.2) | Verify that Manual Answer Mode is applied by the Invited PoC Client when Inviting PoC User has requested Manual Answer Mode be required in PoC Session invitation.      |
| ERROR FLOW | [01]: Pre-established Session torn<br>down after sending REFER request                                      | Verify that the event is detected, the involving entities release the relevant resources and transit to the initial state in this procedure.                            |

Table 7: Optional Test Requirements for PoC Session Initiation, Joining and Release

#### 5.1.2.2 PoC Session-related Features

| OPTIONAL    | FEATURES  | TEST REQUIREMENTS   |
|-------------|---|---|
| NORMAL FLOW | [01]: Session modification: Session on hold (AD 8.21/CP 6.1.4.2)  | Verify that Session-on-Hold request by PoC Client is properly handled.  |
|             | [02]: Subscription to Participant information for current status (one-off request) (AD 9.10/CP 6.1.9, 7.2.1.11) during a PoC Session.                                   | Verify that PoC Subscriber can get the current status of Participant information during a PoC Session after sending a Participant information request.                |
|             | [03]: Subscription to Participant information for a period of time (continuous mode) (AD 9.10) during a PoC Session.  | Verify that PoC Subscriber can get<br>Participant information for a period of<br>time during a PoC Session after<br>sending a Participant information                 |
|             | Continuous mode.  | request.  |
|             | [04]: Participant Information in Unrestricted Chat PoC Group and joining Handling of request for Participant information for a joining user (RD                         | Verify that the adding to the list of Participants and its distribution to other requesting PoC Users when privacy is not indicated in the PoC session establishment. |
|             | 6.1.4.4/AD 9.10/CP 7.2.1.11)  [05]: Handling of request for Participant information in communication phase of all Group modes (RD 6.1.5.3/AD 9.10/CP 7.2.1.8, 7.2.1.11) | Verify that distribution of Participant information to other PoC Users during a session (on request/continuously) is handled based on privacy settings.               |
|             | [06]: Identity Information of inviting PoC User for all session modes to invited party(ies) (RD 6.1.4.3/AD 8.17/CP 7.3.2.2)   | Verify that the invited party can receive the identity information of the inviting PoC User based on privacy settings.  |
|             | [07]: Talker Identification provided to   | Verify that the PoC Server performing   |

|            | other Participants (RD 6.1)   | the Controlling PoC Function sends<br>Talker Identification to all Participants<br>in the PoC Session in the beginning of<br>the Talk Burst.  |
|------------|---|---|
|            | [08]: Talker Identification provided to other Participants (RD 6.1) | Verify that the PoC Server performing<br>the Controlling PoC Function sends<br>Talker Identification to all Participants<br>in the PoC Session in the beginning of<br>the Talk Burst. |
| ERROR FLOW |   |   |

**Table 8: Optional Test Requirements for PoC Session-related Features** 

#### 5.1.2.3 PoC Session-unrelated Features

| OPTIONAL    | OPTIONAL FEATURES  |  |
|-------------|--|--|
|             | [01]: Treatment of PoC Alert if Instant<br>Personal Alert Barring is active (AD<br>8.27.3/CP 7.4.1.2).                                       | Verify that PoC Alert is rejected and an error message is sent to the originating PoC user.  |
|             | [02]: Sending of Group advertisement (AD 9.11/CP 6.2.5)  | Verify that PoC Client is able to send Group advertisement messages.   |
| NORMAL FLOW | [03]: Receiving of Group advertisement (AD 9.11/CP 6.2.5)  | Verify that PoC Client is able to receive Group advertisement messages.  |
|             | [04]: Hiding of PoC Group Identity (a) from all Participants or (b) from some Participants, but not from PoC Group administrator (RD6.1.9.6) | Verify that PoC Group Identity is hidden for (a) and (b). PoC Group administrator should receive the PoC Identity information in both cases.   |
| ERROR FLOW  | [01]: The PoC User requests privacy when initiating a Group Advertisement.   | Verify that the PoC Client does not allow privacy in Group Advertisement by either rejecting the request for privacy or by not providing the possibility in the user interface for a PoC User to request privacy when initiating a Group Advertisement. (CP 6.1.9) |

**Table 9: Optional Test Requirements for PoC Session-unrelated Features** 

### 5.1.2.4 Talk Burst Control (no queuing)

| OPTIONAL    | FEATURES  | TEST REQUIREMENTS   |
|-------------|---|---|
| NORMAL FLOW | [01]: Talk Burst request during a PoC Session (AD 9.13.1/UP 6.5.4.1.3):  Request when no other Participants in the session -> Talk Burst deny | Verify that Talk Burst is denied when no other Participants in the session. |
| ERROR FLOW  |   |   |

Table 10: Optional Test Requirements for Talk Burst Control (no queuing)

### 5.1.2.5 Talk Burst Control (queuing)

| OPTIONAL FEATURES |                                   | TEST REQUIREMENTS                     |
|-------------------|-----------------------------------|---------------------------------------|
| NORMAL FLOW       | [01]: Talk Burst request during a | Verify that Talk Burst request is not |

|            | session (AD 9.13.2/UP 6.4.4.1.2.e, 6.4.4.3.3) queue support:  Request when floor is not idle -> Talk Burst request queued -> Talk Burst granted  | denied but queued indication is sent.<br>Later Talk Burst is granted.  |
|------------|--|--|
|            | [02]: Talk Burst request during a session (AD 9.13.2/UP 6.4.4.1.2.e, 6.4.4.3.3) queue + priority support:  Request when floor is not idle -> Talk Burst request queued indication ->  Talk Burst granted according to priority                                     | Verify that Talk Burst request is not denied but queued indication is sent. Later Talk Burst is granted according to priority.                                     |
|            | [03]: Talk Burst request during a session (AD 9.13.2) queue + timestamp support:  Request when no one has permission to send a talk burst -> Talk Burst request queued indication -> Talk Burst granted according to a timestamp value at the same priority level. | Verify that Talk Burst request is not denied but queued indication is sent. Later Talk Burst is granted according to a timestamp value at the same priority level. |
|            | [04]: Talk Burst request during a session (AD 9.13.2) queue + timestamp support:  Request when no one has permission to send a talk burst -> Talk Burst request queued indication -> Talk Burst granted according to a timestamp value at the same priority level. | Verify that PoC Client can include the same timestamp value of the original Talk Burst request in the resending Talk Burst request.                                |
|            | [05]: Position in queue (RD 6.1.5.1/UP 6.4.4.3.3.3.c-ii, iii)  | Verify that the information about the PoC User's position in the queue needs to be sent to the requesting PoC User.  |
|            | [06]: Cancel of queued request (RD 6.1.5.1,6.2.1/UP 6.5.5)   | Verify that the queued request is cancelled upon request by the PoC User.  |
|            | [01]: Talk Burst request not received<br>by PoC Server (AD 9.13.2/UP 6.4.4)  | Verify that the event is detected, the involving entities release the relevant resources and transit to the initial state in this procedure.                       |
| ERROR FLOW | [02]: Queued Talk Burst cancel request not received by PoC Server (AD 9.13.2/UP 6.4.4)   | Verify that the event is detected, the involving entities release the relevant resources and transit to the initial state in this procedure.                       |
|            | [03]: Talk Burst control (granted, queued or deny) not received by PoC Client (AD 9.13.2/UP 6.2.9)   | Verify that the event is detected, the involving entities release the relevant resources and transit to the initial state in this procedure.                       |
|            | [04]: Talk Burst release not received<br>by PoC Server (AD 9.13.2/UP 6.4.4)  | Verify that the event is detected, the involving entities release the relevant resources and transit to the initial state  |

|  | in this procedure. |
|--|--------------------|
|  | 1                  |

Table 11: Optional Test Requirements for Talk Burst Control (queuing)

#### 5.1.2.6 Multiple Sessions

The descriptions on the multiple sessions, or simultaneous sessions, are found in the PoC RD 6.2.11/AD 8.10, 9.8/CP 6.1.12, 6.2.7 and 7.3.1.12.

| OPTIONA     | TEST REQUIREMENTS  |   |
|-------------|--|---|
| NORMAL FLOW | [01]: Participant in more than one PoC Session is able to monitor the TBCP traffic of all PoC Sessions, he participates in.  | Verify that PoC Participant can monitor multiple PoC Group Sessions.  |
|             | [02]: Participant in more than one PoC Session receives indication about the PoC Session, which is currently received.   | Verify that PoC Participant can get identification, which PoC Session is being received.  |
|             | [03]: Participant in more than one PoC Session is able to select the PoC Session. To select a PoC Session for listening the locking or priority is changed.  | Verify that the PoC Participant is able to select the PoC Session, which he wants to listen and/or talk to.   |
|             | [04]: Participant in more than one PoC Sessions is able to monitor the TBCP traffic of other PoC Sessions, when talking or listening to the selected PoC Session.  | Verify that the PoC Participant is able to continue monitoring other PoC Sessions while talking or listening to the selected PoC Session.                                     |
|             | [05]: Participant in more than one PoC Sessions is able to continue the conversation in the selected PoC Session although there is traffic in another PoC Session on the same or lower session priority level. | Verify that the traffic is filtered put from other PoC Sessions and a single Conversation can be heard.   |
|             | [06]: Participant in more than one PoC Session has higher priority for transmission than for receiving.  | [a]: Veryfy that the transmission is not interrupted, although the Talk Burst is started in another PoC Session.  |
|             | [07]: Participant in more than one PoC Session is able to change his Primary PoC Session.  | Verify that PoC Participant is able to change his/her Primary PoC Session and start to hear the Primary PoC Session, when there is traffic.                                   |
|             | [08]: Participant in more than one PoC Sessions continues listening the Primary PoC Session as long as there is traffic in the PoC Session, although other Simultaneous PoC Sessions have traffic, too.        | [b]: Verify that as long as there is traffic in the Primary PoC Session, the Participant SHALL continue hearing it, until the discussion has ended (timeout occurs).          |
|             | [09]: Separate 1-to-1 PoC Session is initiated while having a PoC Session.   | [a]: Verify that a Participant who participates in a PoC Session (1-to-1 or 1-to-many) is able to initiate and conduct a separate 1-to-1 PoC Session with any other PoC User. |
|             | [10]: Separate 1-to-1 PoC Session is released while having an other PoC  | [b]: Verify that a Participant of an ongoing PoC Session (1-to-1 or 1-to-   |

|            | Session.  | many) is able to receive separate 1-1<br>PoC Session communications from<br>any other PoC User.  |
|------------|---|--|
|            | [11]: Participant in the separate 1-to-1 PoC Session can't hear the traffic of the PoC Session, he attended before the separate 1-to-1 PoC Session started.   | [c]: Verify that the 1-1 PoC Session<br>Participants cannot receive speech<br>from the previous PoC Session<br>communication while attending the<br>separate 1-1 PoC Session.  |
|            | [12]: Participant in the separate 1-to-1 PoC Session can't hear the traffic of the PoC Session, he attended before the 1-to-1 PoC Session started, until the 1-to-1 PoC Session is released, if it is not yet released. | [d]: Verify that the first PoC Session is suspended (i.e. the Participant is not able to hear/transmit any Talk Bursts from/to the first PoC Session) while the Participant is engaged in the separate 1-to-1 PoC Session, and will be automatically resumed when the separate 1-to-1 PoC Session is released. |
| ERROR FLOW | [01]: Simultaneous PoC Sessions:<br>New PoC Session invitation: PoC<br>Client does not support Simultaneous<br>PoC Sessions.  | Verify that PoC Client is able to either accept the new PoC Session and disconnect the existing PoC Session or not accept the new PoC Session request.   |
|            | [02]: Priority setting request not accepted by PoC Server   | Verify that the PoC Client is able to continue to use the current setting.   |
|            | [03]: Lock/unlock setting request not accepted by PoC Server  | Verify that the PoC Client is able to continue to use the current setting.   |

**Table 12: Optional Test Requirements for Multiple Sessions** 

## 5.2 Backwards Compatibility

None

## 5.3 Enabler Dependencies

This clause outline what dependencies Enabler Push to talk over Cellular-V1\_0 has on other Enablers.

Enabler Push to talk over Cellular-V1\_0 has the following dependencies.

| Dependencies                 | Descriptions  |  |
|------------------------------|---|--|
| Enabler Group<br>Management  | The PoC Client and the PoC Server SHALL use the enabler Group Management as listed in [OMA-GM]. |  |
| Enabler Presence             | The PoC Client and the PoC Server MAY use the enabler Presence as listed in [OMA-PR].           |  |
| Enabler Device<br>Management | The PoC Client SHALL use the enabler Device Management as listed in [OMA-DM].                   |  |

# Appendix A. Change History

# (Informative)

## A.1 Approved Version History

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

## A.2 Draft/Candidate Version 1.0 History

| Document Identifier  | Date         | Sections      | Description  |
|----------------------|--------------|---------------|--|
| Draft Versions       | 19 Aug 2004  | All           | Blank sections from template: OMA-POC-2004-0575                  |
| OMA-ETR-PoC-V1_0     |              | 5.1           | Introductory texts for section 5: OMA-POC-2004-0571              |
|                      | 25 Sept 2004 | 5.1           | Required items in section 5:                                     |
|                      |              |               | OMA-POC-2004-0699, OMA-POC-2004-0700R01,                         |
|                      |              |               | OMA-POC-2004-0701R01, OMA-POC-2004-0702,                         |
|                      |              |               | OMA-POC-2004-0703R01, OMA-POC-2004-0704R01,                      |
|                      |              |               | OMA-POC-2004-0705, OMA-POC-2004-0706R01,                         |
|                      |              |               | OMA-POC-2004-0717R02, OMA-POC-2004-0718R02,                      |
|                      |              |               | OMA-POC-2004-0719R02, OMA-POC-2004-0720R02,                      |
|                      |              |               | OMA-POC-2004-0735R02.  |
|                      | 27 Sept 2004 | 3.3, 4,       | OMA-POC-2004-0755, OMA-POC-2004-0756R01,                         |
|                      |              | 5.1.1, 5.1.2, | OMA-POC-2004-0757, OMA-POC-2004-0758R01,                         |
|                      |              | 5.2, 5.3      | OMA-POC-2004-0759R01, OMA-POC-2004-0760R01.                      |
|                      |              |               | "Instant Personal Alert" reworded to "PoC Alert"                 |
|                      | 28 Sept 2004 | 2.1           | OMA-POC-2004-0754R02.  |
|                      | 25 Oct 2004  | 5.1.1, 5.1.2  | Remove charging items: OMA-POC-2004-0807,                        |
|                      |              |               | Items on errors: OMA-POC-2004-0808R03,                           |
|                      |              |               | Item newly included according to AD: OMA-POC-2004-0811.          |
|                      |              |               | History document numbers corrected                               |
|                      | 26 Oct 2004  | 5.1.2.1       | Missing item from OMA-POC-2004-0811 included.                    |
|                      | 27 Oct 2004  | 5.1.1.3       | Corrections on the participant information                       |
|                      |              | 5.1.1.4       | OMA-POC-2004-0912  |
|                      | 16 Nov 2004  | 5.1.2.1       | One feature in the error flow removed: OMA-POC-2004-1015R01      |
|                      |              | All           | Editorial cleanup: OMA-POC-2004-1014R01                          |
|                      | 17 Nov 2004  | 3.2, 5.1.1.3  | Missing definition filled: OMA-POC-2004-1052                     |
|                      | 12 Jan 2005  | All           | Update due to the consistency review based on OMA-POC-2005-0083. |
|                      |              |               | Modification includes  |
|                      |              |               | OMA-POC-2005-0073, OMA-POC-2005-0075R01,                         |
|                      |              |               | OMA-POC-2005-0078.   |
|                      | 31 Jan 2005  | All           | OMA-POC-2005-0084, OMA-POC-2005-0097R01,                         |
|                      |              |               | OMA-POC-2005-0118, OMA-POC-2005-0119                             |
|                      |              |               | OMA-POC-2005-0133, OMA-POC-2005-0163                             |
|                      |              |               | OMA-POC-2005-0185R01.  |
|                      | 02 Feb 2005  | Cover page    | Final alignment among specifications.                            |
|                      |              | 3.2, 4        |  |
| Candidate Versions : | 17 Mar 2005  | ,             | Status changed to Candidate by TP:                               |
| OMA-ETR-PoC-V1 0     |              |               | OMA ref# OMA-TP-2005-0059-PoC-V1 0-for-candidate-approval        |
|                      | 01 Aug 2005  | Cover page    | OMA-POC-2005-0261R01, OMA-POC-2005-0262                          |
|                      |              | 5             | OMA-POC-2005-0302, OMA-POC-2005-0308R02                          |
|                      |              |               | OMA-POC-2005-0322, OMA-POC-2005-0325                             |
|                      |              |               | (Previous) subclause 5.1.1.3 removed.                            |
|                      |              |               | Subclause 5.1.2.6 Error [02] and [03] modified on-line editing   |
|                      |              |               | according to a question by IOP-POC SWG.                          |
|                      | 06 Oct 2005  | 5.1.2.1       | Updated according to agreed CR: OMA-POC-2005-0667                |