Push-to-talk over Cellular (PoC) service allows cell phones to be used as walkie-talkies. A group of users in a PoC session can communicate by simply pressing a button and speaking when the phone indicates it is OK to do so. The user releases the button when he or she is done speaking.

When a user begins to speak, the PoC server allocates resources and notifies other users in the PoC session that the user is speaking. The PoC server then delivers the speech packets to all the users in the session.

PoC is resource efficient as it allocates resources only when a user is actually speaking. This makes it suitable for applications where there are long gaps between individual session participants speaking.

This flow covers the case where PoC Client A invites PoC Client B to a Pre-established Session by sending SIP REFER request to PoC Server A.

This sequence diagram was generated with EventStudio System Designer 4.0 (http://www.EventHelix.com/EventStudio). Copyright © 2008 EventHelix.com Inc. All Rights Reserved. The EventStudio source files for this document can be downloaded from http://www.eventhelix.com/call-flow/ims-poc-pre-established.zip.
Push-to-Talk session activated

Indication to the user that the push-to-talk session has been activated.

Talk Burst from PoC Client A to B

Permission to talk

The floor has now been granted to PoC Client A.

Indicate to PoC Client B that the floor has been assigned to PoC Client A.

PoC Client A Speaking Indication

Notify the user that the floor has been granted to PoC Client A.

Voices

The PoC Client A sends the RTP Media to the PoC Client B via PoC Server A and PoC Server B.

Push-to-Talk Button Released

PoC Client A released the “Push-to-Talk” button to signal that he or she has stopped speaking.

Release of the Push-to-Talk button results in the media floor being released.

Floor is available indication

PoC Server A informs all users in the PoC session that the floor is available for another user to speak.

Indicate to the user that the floor is available for speaking.

Talk Burst from PoC Client B to A

Push-to-Talk Button Pressed

PoC Client B wishes to speak so he or she presses the “Push-to-talk button” on the phone.

Request the floor for the session.

The floor is granted.

Permission to talk

Indicate to the user that the floor has now been granted.
Module Interfaces (IMS PoC Client Invitation)

<table>
<thead>
<tr>
<th>Wireless Network A</th>
<th>IMS</th>
<th>Wireless Network B</th>
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</table>

**MBCP Media Burst Acknowledgement**
- **protocol = RTCP APP**

**PoC Client B Speaking Indication**
- **Voice**

**RTP Media**
- **Voice**

**MBCP Media Burst Release**
- **protocol = RTCP APP**

**Push-to-Talk Button Released**
- PoC Client B released the "Push-to-Talk" button to signal that he or she has stopped speaking.

**RTP Media**
- **Voice**

**Floor is available indication**
- **protocol = RTCP APP**

**Floor is available indication**
- Indicate to the user that the floor is available for speaking.

**PoC Server B** sends the RTP Media to the PoC Client A via PoC Server B and PoC Server A.

**PoC Server A** informs all users in the PoC session that the floor is available for another user to speak.

Indicate to the user that the floor is available for speaking.