

Cisco Unified MeetingPlace, Release 6.x > Cisco Unified MeetingPlace Audio Server

Talk-off is the unexpected detection of a digit (often a # key) by voice systems such as Cisco Unified MeetingPlace.

Discussion:

This is always a statistical possibility due to the imperfect nature of in-band (voice and DTMF sharing the same voice channel) DTMF tone detection algorithms in any voice device (Cisco Unified MeetingPlace, PSTN voice gateways). Ideally, in-band DTMF detection in these devices will correctly detect digits 100% of the time with no false detection of voice as digits. Practically, a small number of errors -- some voice will be falsely detected as a digit (aka "talk-off") -- are allowed. While most cases of talk-off cause no reaction in Cisco Unified MeetingPlace during a meeting -- false detection of any number "1" to "9" or "*" -- and are ignored, false detection of "#" or "0" can cause unexpected Cisco Unified MeetingPlace behavior.

The Cisco Unified MeetingPlace in-band DTMF detector meets the requirements of the "Bellcore Talk-off Test" specifications. The spec allows up to 500 false detections of any digit "0" to "9", "#" and "*" after the three hour test with real voice snippets. Cisco Unified MeetingPlace measures at 356 false detects for all these digits with only four false "#" and four false "0" digit detects during this period. So the Cisco Unified MeetingPlace DTMF detector exceeds the Bellcore spec and changes to the DTMF detection algorithm are very unlikely.

Realistically, though, people are all different. Unfortunately, some voices and speech patterns are more prone to triggering the DTMF detector than others, so certain users may have a much higher probability of seeing this problem.

Recommendations:

- For System Administrators: Use out-of-band digit transmission (RFC-2833, KPML) wherever possible. However, using RFC-2833 may only shift the talk-off problem from the Cisco Unified MeetingPlace DTMF detector to a voice gateway DTMF detector.
- For End Users: Use the best possible audio connection -- a land-line or a good IP connection with G.711. In some cases cordless phones may distort speech enough to make a user prone to talk-off.
- For End Users: While it may be nearly impossible to avoid, users who are prone to triggering false "#" digits usually speak something like "umm" for a relatively long period of time. These sounds should be avoided or at least shortened.