Announcements with Music-on-Hold

White-paper

Cisco Unified Communications Manager Engineering Team

Rex McAnally
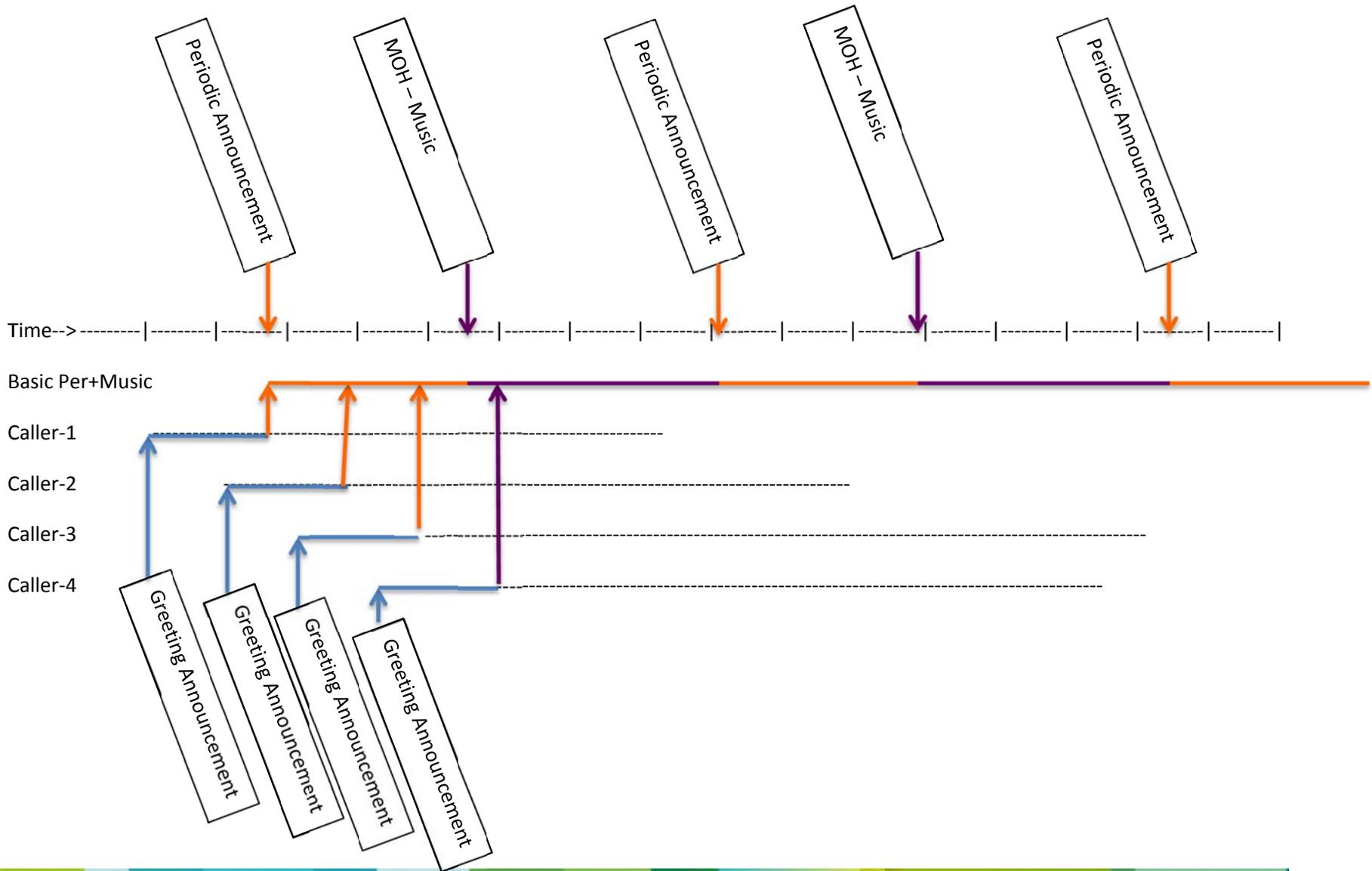
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Purpose of this document

In Cisco Unified Communications Manager release 9.1(1) the "Native Call Queuing" feature added some capabilities to Cisco Unified Call Manager related to customized audio announcements and Music-on-Hold. There were some design choices made in the sequence order and what callers hear under differing circumstances.

 This "white-paper" is to attempt to clearly explain how the current implementation works from the caller's view.

Current Behavior for each MOH Server for each MOH Audio source

Time--> --------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

Periodic Announcement

MOH – Music

Periodic Announcement

MOH – Music

Periodic Announcement

Basic Per+Music

Caller-1

Caller-2

Caller-3

Caller-4

Greeting Announcement

Greeting Announcement

Greeting Announcement

Greeting Announcement

Callers will initially hear the "Greeting" and then will join a common "Basic periodic + music" audio stream. When callers join the common "Basic periodic + music" stream they may hear the periodic announcement immediately or just a portion of the periodic announcement or the music.

The above diagram is an "overall" view with the following provisioning/configuration assumptions:

- The optional "initial" (greeting) announcement is configured

- For native call queuing feature, the "initial" announcement is configured to play when caller is queued.

- The optional "periodic" announcement is configured

The following are very important notes of interest:

- Each caller hears the "Greeting (initial) announcement" from beginning to end unless they are removed from the queue/hold (disconnect or agent becomes available). If the greeting announcement is not configured the queued/held caller will immediately be connected to the "Basic Periodic+Music" audio stream.

- The FIRST caller to be queued (or placed on hold) for a specific MOH audio source # on a specific MOH server will trigger the start of the "Basic Periodic+Music" audio stream.

- When the FIRST caller triggers the start of the "Basic Periodic+Music" audio stream the FIRST caller will hear the periodic announcement first. So, the "greeting (initial)" announcement will be immediately followed by the periodic announcement. (This is probably not desired but it is how it is currently implemented). **NOTE:** The greeting announcement file could contain some music audio at the end to ensure a separation between the greeting and periodic announcements.

- The "Basic Periodic+Music" audio stream for a specific MOH audio source # on a specific MOH server will continue until approximately 10 seconds AFTER the last queue/held caller is removed from listening (removed from queue/hold).

- When the end of the music audio file is reached while streaming the "Basic Periodic+Music" stream the audio file will automatically restart from beginning of the music audio file. (Automatically wraps back to start)

- If the same MOH audio source (#) is used for multiple Native Queues (Hunt Pilots) the concept of "First" held/queued caller can be for any of the queue(s).   So, first caller to be queued for any queue using the same MOH source will be the one to trigger the start of the "Basic periodic+music" audio stream.

- The above diagram shows that Caller 2 and Caller 3 start hearing from the "Basic Periodic+Music" stream at a point in the MIDDLE of the periodic announcement.

- The diagram shows that Caller 4 starts hearing from the "Basic Periodic+Music" stream at at point into the music audio file (not at the beginning).

- As you can see with callers 2,3 & 4 it all depends on timing as to what they will hear when joining the "Basic Periodic+Music" audio stream.

At any point after the initial greeting announcement; every caller listening to "Basic Periodic+Music" audio stream (from same MOH server) will be listening to the same audio. For Example: If you were to be able to listen to the audio of the 4 callers once caller #4 finishes the "Greeting (initial) announcement", you would find that ALL 4 callers are hearing exactly the same audio at the same time.

B – Basic periodic + music

G - Greeting

Phone 1
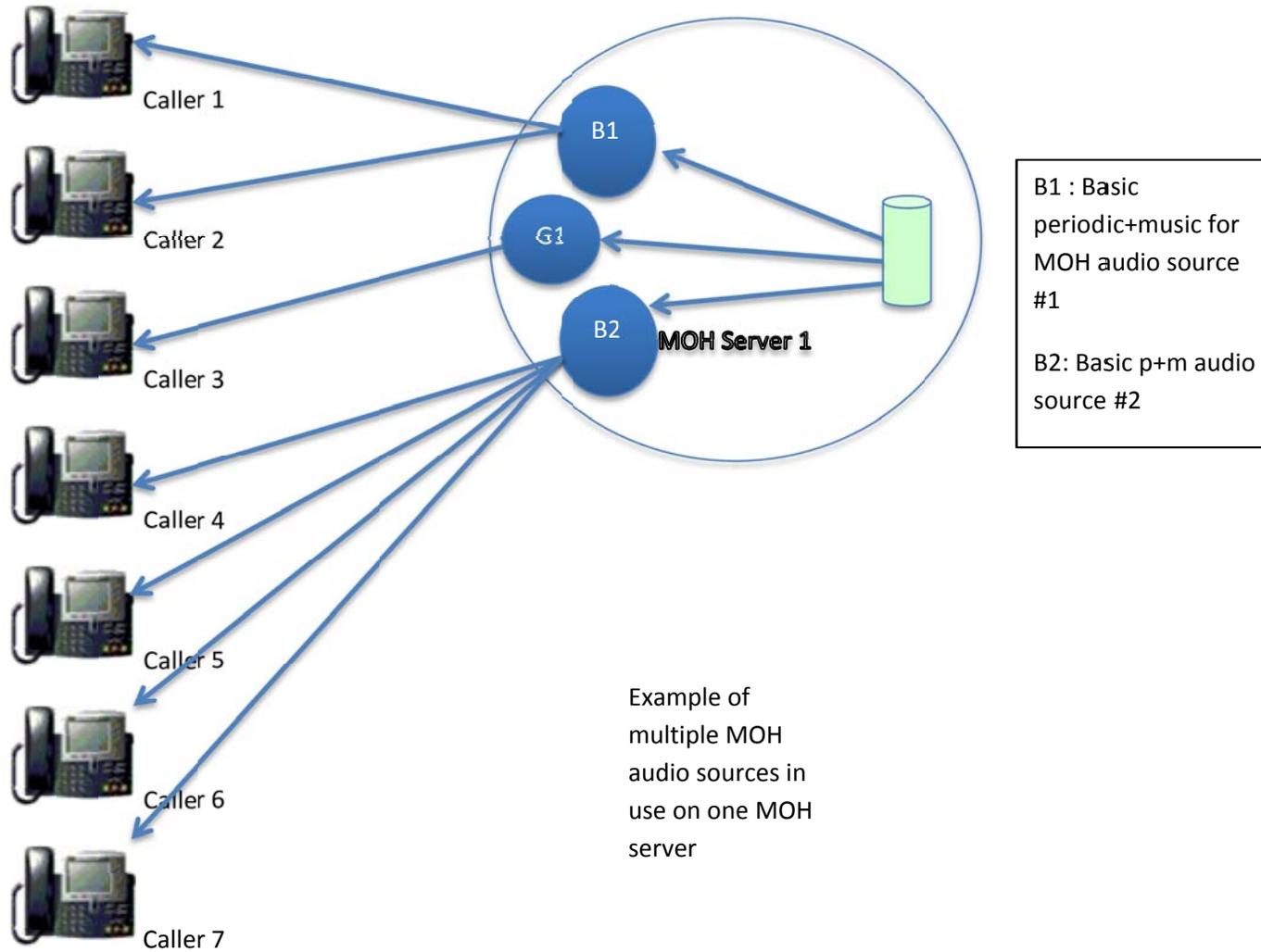
MOH Server

Phone 4

Phone 2
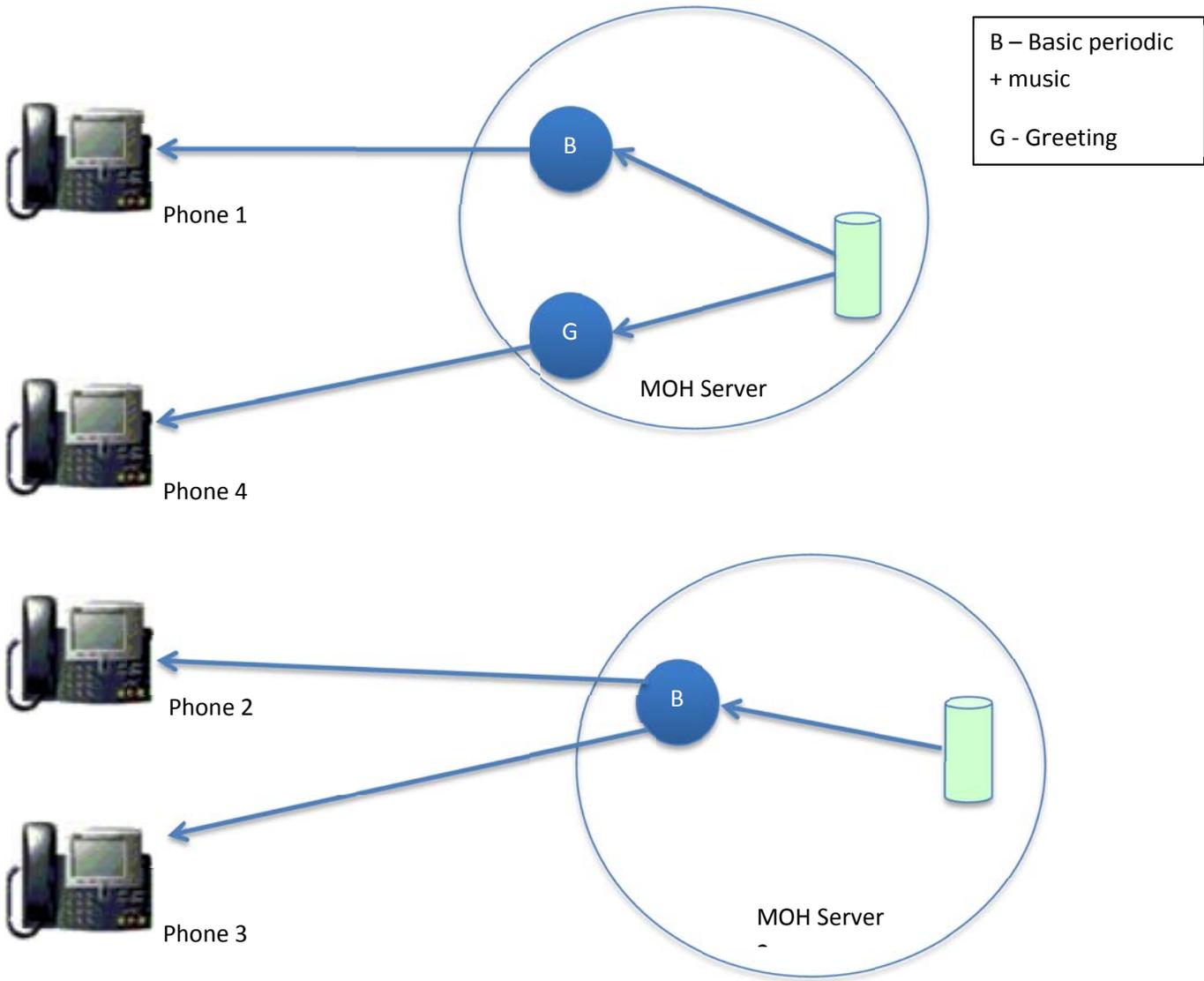
Phone 3

MOH Server

Phone 3

This shows 2 MOH servers where one is playing a greeting to Phone 4 and the basic periodic+music stream to Phone 1 while the second MOH server is playing the basic periodic+music to phones 2 & 3. The basic stream audio from each MOH server will not be synchronized so audio to phone 1 will be at a different content point than the audio going to Phones 2 & 3.

Phone 1

B

MOH Server

Phone 4

Phone 2

B

MOH Server
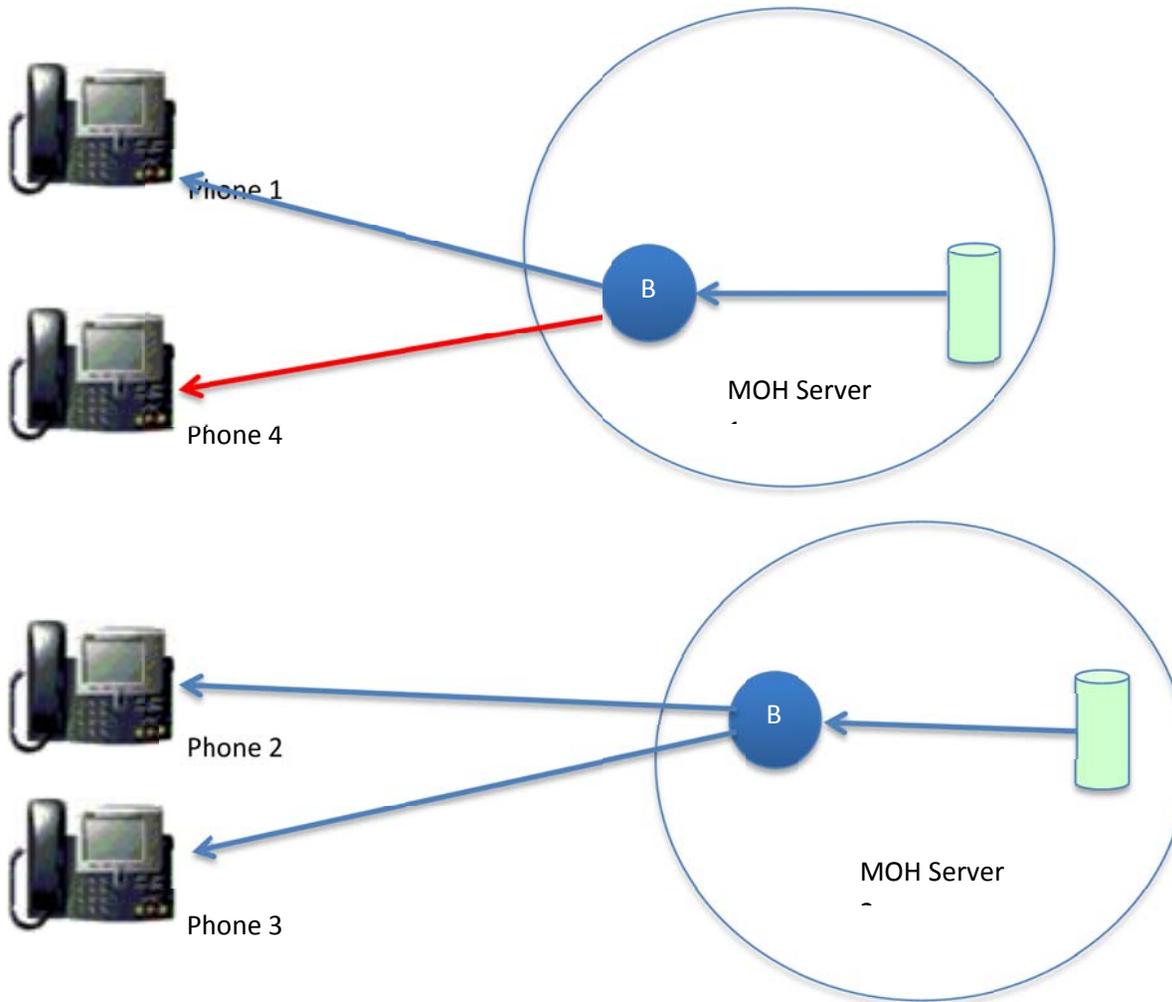
Phone 3

As Phone 4 finishes the greeting (G) it is joined to the basic periodic+music stream of server 1.

Caller 1

Caller 2

Caller 3

Caller 4

Caller 5

Caller 6

Caller 7

B1

G1

B2

MOH Server 1

B1 : Basic periodic+music for MOH audio source #1

B2: Basic p+m audio source #2

Example of multiple MOH audio sources in use on one MOH server

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