

Dialogic® Vision™ CX Video Gateway Implements Video Call Completion to Voice

Technology Brief

3G networks around the world are supporting interactive, innovative, two-way mobile video services using 3G-324M technology; however, depending on the density of video service subscribers in the 3G mobile network, there is a chance that a video call will not complete because the called party is not equipped to receive a video call. There are a number of call scenarios in which this can occur, depending on the state of the called party. For example, a video call will not complete if the called party:

- Is not a 3G video subscriber
- Does not have a 3G-capable mobile handset
- Is roaming in a network where 3G video calls are not supported
- Is forwarded to voice mail
- Is out of coverage, or has the handset switched off

When video calls are not completed, the caller must retry/re-dial in order to reach the called party in a voice call.

This inability to complete video calls can have a pronounced negative effect on customer satisfaction. For example, it might make the 3G video subscriber less likely to originate video calls, resulting in decreased revenue for the service provider. It might even discourage 3G video subscribers from becoming early adopters of other new offerings, which can erode the customer base needed to roll out new, advanced services and impede a service provider's future growth.

The inclusion of Video Call Completion to Voice (VCCV) capabilities in Dialogic® Vision™ CX Video Gateways can be very beneficial to service providers, because VCCV can increase customer satisfaction and loyalty as well as increase the adoption of new video services.

This technology brief describes how the Vision CX Video Gateway implements VCCV.

One Gateway for both Voice-Only and Video Calls

With its VCCV capability, the CX Gateway can seamlessly connect voice-only calls to 3G-324M video calls. The default VCCV capability for the CX Gateway works as follows:

1. When a 3G caller makes a video call and the called party does not support 3G video, the network detects this and reroutes the call to the CX Gateway running VCCV.
2. The CX Gateway accepts the video call and initiates a 2G voice-only outbound call to the called party.
3. When the called party picks up, an audio channel is connected between the 3G video caller and the 2G voice called party. This occurs without ending the initial 3G video call, thus providing a better calling experience for the 3G video caller, since the caller does not have to initiate a voice-only call and re-dial the called party's number.

The VCCV service provides early media support, which enables media to flow between the caller and called party before the call is answered. This capability works in conjunction with a Mobile Switch Controller (MSC) in the service provider's network that also supports early media, allowing service providers to provide announcements and other applications, such as video ringback tones.

Customizing the VCCV Service

The service provider can customize the CX Gateway's VCCV service by directing the CX Gateway to take actions like the following:

- Present the video caller with an audio or video announcement. For example, the CX Gateway can announce that it is initiating a voice-only call, or it can provide call progress information. This announcement capability does not require external media servers or application servers.
- Present the video caller with a set of choices through interactive VoiceXML dialogs before the call parties are connected. These dialogs can create a set of audio and/or video menu choices that let the caller choose whether to:
 - Complete the call as a voice call.
 - End the call without completion.
 - Complete the call for free, but sponsored with advertising video. This option can only be implemented if the MSC on the service provider's network supports early media.
- Stream video content, such as call progress information or consumer advertising, to the video caller's screen during the voice call.

Efficient Deployment

Because the CX Gateway integrates ISDN and SS7/ISUP signaling in a single 2U unit, it allows for efficient deployment. Users can start small with a single CX Gateway and, later on, scale up to 5,000 ports per SS7 point code by adding additional CX Gateways. VCCV functionality leverages the CX Gateway's support for both 2G and 3G mobile networks without requiring any TDM to IP conversion for the audio path. This provides a cost-effective, high quality audio channel setup between the 3G caller and the 2G called party.

Enabling the Solution

Figure 1 provides an example of how the VCCV capability is enabled by the Vision CX Video Gateway:

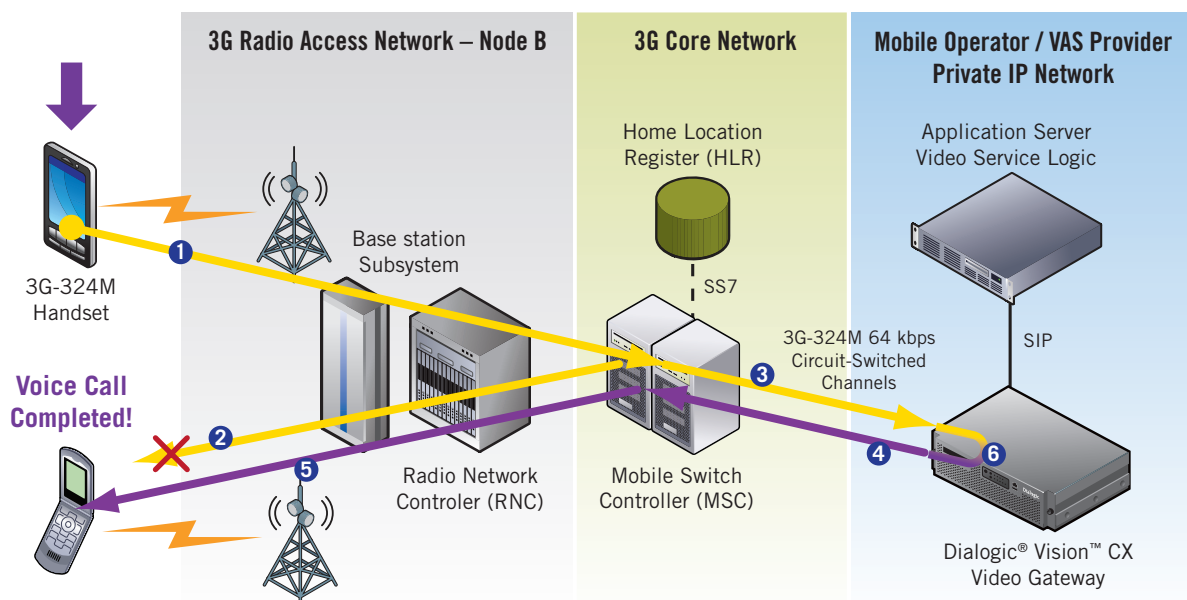


Figure 1. VCCV Functionality in the Dialogic® Vision™ CX Video Gateway

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The circled numbers in Figure 1 correspond to the following actions:

- 1 A video call is placed with a 3G-324M handset.
- 2 The MSC determines that the video call is unable to terminate.
- 3 The MSC routes the video call to the VCCV service, which is enabled by the CX Gateway. The VCCV service receives the video call.
- 4 The CX Gateway initiates a separate voice call to the called party. The CX Gateway can optionally stream service provider-defined audio or video content to the caller during the voice conversation.
- 5 The voice call is answered by the called party.
- 6 The voice call is bridged with the original caller.

For More Information

[Dialogic® Vision™ CX Video Gateway](#)

[Dialogic® Vision™ CX Video Gateway Datasheet](#)

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