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To Barge-In Or Not To Barge-In

Barge-in -- the ability to interrupt a system prompt with voice or DTMF input -- is a very useful tool that the Voice User Interface (VUI) designer can tap into to effectively adapt to various exchange settings the system may need to navigate. In this issue of the VUI View, I touch on the main factors the VUI designer needs to consider when deciding whether to turn barge-in on or off in a dialog flow.

The barge-in setting in Site Builder is available in the Advanced Options of the following types of Voice Pages: Message, Question, Voice Mail, and Transfer. The available settings are, "On": Callers can interrupt prompt playback with voice or touch-tone input; and "Off": Callers must listen to all the prompts before voice or touch-tone input. The default setting for all pages is "On".

What is the caller's level of experience with the system?

The first and perhaps most obvious factor the designer must consider when considering whether to turn barge-in on or off is the caller's level of experience or familiarity with the application. If the application is one where the vast majority of callers are going to be repeat users and therefore very familiar with the call flow and the options available at any point in the call (e.g., employee check-in/check out), then the default setting for barge-in should be "on". If the caller is a one-time or very infrequent caller (e.g., a phone survey), then the setting should be set to "off".

The ability to interrupt is usually a must have when dealing with experienced users. People who know what they want to do, what to say, and how to say it, don't want or need to wait for the system to finish talking before they provide their response. By contrast, the concern with a novice caller is one of effectiveness: can the system interact with the novice caller in such a way that the caller can, without frustration, accomplish the tasks they want to accomplish. Key to ensuring that the caller is able to accomplish their task is the ability to communicate instructions without undue or disruptive interruptions.

What is the call environment?

If your application is accessed from noisy environments (e.g., busy street, factory floor), consider doing two things. First, set the value of sensitivity below the default setting of 0.50; this will enable the system to tolerate a higher threshold of noise without taking it as input from the caller. Second, turn barge-in off, thus at least ensuring that the system will be able to complete playing the prompt to the caller. For more information, see: <http://www.angel.com/newsletter/10-04/vuiView.js>

What is the prompt type?

There are four types of prompts which require extra attention when selecting your barge-in setting. For more on prompt types

Error prompts: Turn barge-in off after a no input or a no-match, if you suspect that the error was caused because the caller did not listen carefully to instructions. For instance, if a caller thinks the system is expecting a date when in fact it is expecting a zip code, turning barge-in off so that the caller can hear, "Sorry, I didn't get

that. Please give me your zip code," will help the caller recover. If barge-in is on, the caller is liable to interrupt the prompt after, "Sorry, I didn't get that," and again mistakenly give the application a date. To do this in Site Builder, build two versions of your voice page, one with the barge-in turned on and one with the barge-in turned off.

Confirmation Prompts: These are prompts that confirm, whether explicitly or implicitly, information the caller provided. For such prompts, it is crucial to turn the barge-in off when the system is playing the information to be confirmed.

Content Feed Prompts: These are prompts in which the system is providing some information the caller is seeking (e.g., account balance, a confirmation number). Barge-in should be turned off for such prompts. Other content feed prompts during which you may, by necessity, need to keep the barge-in off are advertisement prompts and disclaimer prompts.

Selection Prompts: These are prompts that offer the caller a list of options to select from. Usually, the barge-in should be turned on for such prompts, thus giving the caller the ability to speak or enter their selection as soon as they hear it. However, in situations where it is important that the caller hear all the options before making their selection, barge-in should be turned off. In either case, it is always a good idea to alert the caller that they can either speak as soon as they hear the option they want to select, or that they will need to listen to the whole prompt before making their selection.

What is the conversational context?

In addition to the caller's level of expertise, the environment from which they are calling, and the content and nature of the prompts the system is playing, a fourth dimension the VUI designer must keep in mind is the conversational context - i.e., where in the structure of the application is the call. Two types of conversation contexts need to be considered when making a decision about barge-in settings:

Beginning of application / section: You usually want to turn barge-in off at the very beginning of your application (unless it is used exclusively by repeat callers), where you are greeting the caller and preparing them for the interaction. The same holds for the beginning of a new section in the call - e.g., a section in a survey.

Transitions: Transitions are also sensitive points in an exchange, since they signal both the end of a phase and the beginning of the next phase. You do not want the marking of this important moment in the exchange to be marred by an unintentional barge-in.