

# Keeping the User In Control

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Adam Elman

Matt Klee

Peter Leppik

Matthew Shomphe

Keeping the user in control is a core principle of good user interface design. A speech system must allow a caller to establish control from the beginning, and maintain that control until the end of the call or handing it off to an agent.

The user must perceive at each point in the interaction that:

- a) The system understands his **intention** (not simply what he says, but what he means), and that
- b) The system is taking the **correct** steps to respond to the user's intention and provide the **expected** level of service.
- c) When the system is not responding appropriately, the user can **change direction** to get back on track.

Unless these conditions are met, the caller will not “play” with the system.

While there is no way to make every call perfect, we can suggest three design guidelines to help the caller stay in control:

- 1) **Get the user's intention first.** If a user is calling a bank to find the nearest ATM, he knows that the bank doesn't really need him to provide an account number. The early part of the interaction should be focused on understanding the caller's intention. Once that has been established, the system can request any necessary information.
- 2) **Be clear about where the call is & where it is going.** The judicious use of landmarking and confirmation prompts gives users a sense of context. For example, if the caller requests an agent, let them know that they will be transferred to a human, even if the application then attempts to partially automate the call.

*S: Okay. Before I transfer you to an agent, I just need a little more information to get you to the right place.*

- 3) **Don't waste the caller's time.** One of the main reasons why users do not want to interact with automated systems is that they feel their time is being wasted; why take the effort to enter a bunch of information that they're just going to have to give to a human later? Specific ideas around this include:

- a. Don't be unnecessarily verbose; in particular be cautious around landmarking & confirmations).
- b. Only ask for the information that's needed (don't ask the question or allow the caller to skip out of the state easily).
- c. Ensure that the infrastructure supports persisting data from the telephony environment to the agent (like CTI + screen pop). If you don't have a CTI, look at other creative ways of persisting data. If you can't, warn the caller that they're going to have to give some information again.

Inevitably, even the best VUI will have problem calls. Keeping the user in control means first, **recognizing** that a miscue has occurred, and second, **resynchronizing** the conversation to make sure that the system understands the user's intention and communicates that to the user:

- 1) **Don't let errors pile up.** Nothing makes a system seem more stupid than an apparently infinite loop of errors. The VUI can detect a disconnect between the user's intention and system understanding using recognition-error counts, repeated disconfirmations, or even keywords indicating frustration.
- 2) **Always offer an escape hatch.** Once a problem has been detected, the system should offer alternatives as to how to proceed. There are three universal "escape hatches" that may be appropriate to offer in an error reprompt or after a disconfirmation:
  - a. **"Go Back"**. If the current interaction is a multi-step process, the user may need only to back up a step or two to resynchronize. We have found that "go back" is a very natural and effective command for this purpose.
  - b. **"Start Over"**. If the interaction is not very deep, or if the user has really found himself down a bad path, the simplest solution may be to just start over from scratch.
  - c. **Bail-out.** If the user has simply hit a wall, he should be able to get to a human being as quickly and as efficiently as possible.

In some cases, a context-sensitive "escape hatch" might be more appropriate. For example, after collecting a set of data, a summary confirmation step can offer to allow the user to change a specific piece of information, or everything:

*S: Great. To confirm, that's two people from San Francisco, California to New York Kennedy leaving Monday, June 14th, and returning Saturday, June 20th. Is that right? Say yes or no.*

**U: No**

*S: What do you want to change? You can say Departure City, Destination City, Departure Date, Return Date, or Number of People.*

**U: It's all wrong.**

*S: Sorry, I didn't get that. Please say Departure City, Destination City, Departure Date, or Number of People. You can also say All, or None.*

Often, in an effort to steer callers away from live agents, companies will insist on designs which take control from the caller and force them through a particular path. Research shows that trying to force callers to use self-service dramatically increases caller dissatisfaction and does little to reduce the number of customers who eventually talk to a human. In contrast, maintaining the user's sense of control throughout an interaction will drastically reduce the most common frustrations with VUI systems.