

Whitepaper

SPEECH-ENABLED VOICE SOLUTIONS

Best Practices for User Interface Design



Speech-Enabled Voice Solutions

If you read newspapers and magazines, browse the Web, or watch television, it should be obvious that the world has lost patience with self-service solutions with poorly designed voice user interfaces. Evangelists like Paul English of gethuman.com and advertisements such as those from Citigroup have capitalized on these strong reactions and have added to the uproar over the ineffectiveness of many deployed speech-enabled self-service solutions. No contact center manager wants to be named the next poster child for the “worst self-service” ever. But you need automation to handle growing call volumes and to provide 24 hour access to information and services. The key to success is a great voice user interface (VUI). These best practices for VUI design will eliminate much of what makes the voice user interface development process seem scary and difficult.

Whether organizations view the development of a voice user interface as a scary proposition, you can't argue with the need for self-service solutions. Most contact centers simply couldn't provide basic services without them. Examples of common self-service solutions include:

- Automated ordering and order status reporting
- Account information and change of address
- Bill payment
- Support and help desk services, such as password management
- Notifications for collections, scheduling, promotions etc...

Self-service solutions improve satisfaction ratings by providing customers with instant access to information and services. When self-service solutions are used in conjunction with live agent services, they reduce hold times, help balance call loads and reserve agents for callers that need extra attention. Adding speech is a proven method for improving self-service solutions by heightening caller satisfaction, increasing automation rates and lowering overall call time.

UI Design Starts With Understanding Your Customer

The first step in designing a great voice user interface is conducting a complete review of business processes and customer interactions. You want to be sure you are addressing as many customer requirements as possible. However, if you automate things that people don't call about, you will just put a delaying interface in front of them which will be extremely frustrating.

This analysis will also help determine what type of speech technology you need. Directed dialog solutions, which expect you to answer from a limited set of responses – “would you like to be connected to sales or customer service?” – require less grammar development and yield higher recognition rates. However, the detailed prompting required for robust customer service solutions can feel



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confusing and unnatural. The alternative is a natural language “say anything” approach (“how can I help you today?”). These solutions provide callers with a more natural interface and streamline menus for faster navigation. The resources needed to build them, however, are significantly greater. Natural language solutions are more expensive and have longer development cycles because they require expert user interface design skills, significant upfront tuning, and more testing time. Here, organizations must be able to accurately predict what callers will say and also build in error handling scenarios that can refine an unknown response. If they don’t, these solutions can be ineffective and frustrating.

For most organizations, speech solutions permitting natural language responses within a directed dialog framework yield optimal results. Here, developers can carefully define the context and purpose of the dialogue as precisely as possible so the number of possible matches is restricted and effective accuracy is maintained.

Best Practices for UI Design

Once you have determined your overall speech strategy, consider the following tips for creating a VUI that will delight callers and maximize automation rates:

Speak in a common language – Your customers don’t always understand your jargon, including the names of products or services created by well-meaning marketing folks. Save the abbreviations, acronyms and nicknames for company memos and speak plainly to your customers.

Make it fast & easy – Design for both novice and experienced users. Don’t bombard your novice customers with too many options – you’ll just confuse them. Enable barge-in capabilities and give your “power users” options for by passing directions and prompts they don’t need.

Make it easy for callers to reach an agent – There is nothing more frustrating to a new or existing customer than spending time figuring out how to speak with a person. Add a “press zero at any time” option – it will lower call time and save you money in the end. You can always add a friendly “What product are you interested in?” prompt to get them to the agent that can best assist.

Treat callers with respect – You’ll be amazed by the difference that a pleasant, trained voice and the occasional “please” and “thank you” will make in the caller’s willingness to use an automated system.

Use silence – Well-timed pauses help novice and experienced users navigate your system more effectively.



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Make sure grammars carefully match prompts – To generate higher recognition levels and create a better customer experience, you should:

- Provide for all reasonable caller utterances, however, the grammar should cover only the phrases you expect the caller to use.
- Avoid multiple parses – words or phrases that match more than one rule.
- Avoid large grammars that take too long for the speech engine to process.
- Extended pauses in the system's operation will confuse callers.

Take errors seriously – Do not insult or confuse callers with technology-oriented messages, such as “Invalid input.” That might make sense to your IT department, but it won't to your customers. Be positive and say, “I'm sorry I didn't understand that...” Leverage confidence and n-best match data to offer possible responses to increase recognition such as “Did you mean size 7?”

Extend your branding when choosing your solution's “persona” – A fabulous experience with your speech-enabled self-service solution will re-enforce your brand and build customer loyalty. Select voice talent, or persona, that will project the image and style you want. Persona goes beyond the voice talent you choose and includes the tone of the prompts. Options to consider include male/female, old/young, and happy/serious. Also, do not mix voices as callers move from one application to another; carry it through the entire self-service experience.

Personalize the experience wherever possible – Dynamic scripting offers an opportunity to present self-service menus based on customer profile information. Carry personalization through to live agent interactions and eliminate the need for customers to repeat information.

Consider offering multiple languages – This will allow your system to serve your entire customer base.

Be prepared to continually tune your solution – even after production – to ensure the best results.

User Interface Extends Beyond Self-Service

Good user interface design needs to extend beyond automated services and should include ways to personalize the caller experience in all interactions. This means careful attention to how calls are sent to, and answered by, your agents.

First, it is very important for customer satisfaction – not to mention contact center productivity – to send callers to the right agent with correct skills to address their particular issue the first time. Here your design must reflect the fact that inquiries from potential customers may need personal attention.



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Consider adding computer telephony integration (CTI) capabilities to your solution to enable sophisticated call routing that finds the best possible agent to answer that call.

Getting the call to the right agent is just half of the battle. Providing agents with real-time customer data using a “screen pop” is also extremely important. No customer who has just spent time providing their information for a self-service solution is impressed by a company whose agents say “Hello, please tell me your account number.” Providing agents with caller information eliminates this frustration. Including historical information enables agents to immediately begin an intelligent conversation. Imagine the positive impact on your customers when the agent says “Hello, John, I see that you are interested in upgrading your mobile phone service. I can offer you special pricing for six months if you select our Gold Program.”

Contact centers using intelligent routing and CTI-enabled agent screen pops report faster call resolution rates, increased agent productivity, lower wait time and higher customer satisfaction marks.

A Great Speech Interface Speaks for Itself

One company putting these principles into practice is Green Mountain Energy Company, one of the nation’s leading providers of cleaner electricity. They had an outdated IVR system that was difficult to use and drove customers to request agent assistance, even for routine transactions. Envoy Worldwide replaced their system with a next-generation solution based on Envoy 6, the company’s open, standards-based development platform. The Envoy Professional Service Group designed a new speech-enabled voice user interface to provide Green Mountain customers with 24 hour access to Account Information and a Bill Pay service. The new solution has increased automation rates by 100% and enabled Green Mountain to automatically collect twice as many payments compared with their previous system. By decreasing the number of calls vying for agent assistance, Green Mountain is able to provide faster service for those customers that do require personal attention.

A great speech solution tells customers you value their business. Creating a compelling voice user interface does not have to be a daunting task. These tips coupled with an understanding of customer needs will help you create robust self-service solutions that are friendly and easy to use. In the end, both you and your customers will benefit. They can get the information they need, when they need it. You can keep contact center costs under control while continuing to boost customer loyalty.



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