

~~30~~ 49 VUI Tips in 45 Minutes

This is from a session at SpeechTEK in August 2010 moderated by Jenni McKenzie, with panelists David Attwater, Jon Bloom, Karen Kaushansky, and Julie Underdahl. The goal was to provide VUI designers with as many tips as possible during the session.

Helpful Phrases

1. “Which” used up front in a prompt signals a choice really well. “Which of these are you calling about...”
2. “Either” also helps callers understand it’s a two-item list and not a yes/no question.
3. “Help me with something else” (instead of more options) works extremely well, and signals to the caller that what they want might not be on your menu, and that’s OK.

General Rules for Writing

4. Write for the ear not the eye, tap into how people talk conversationally. Read it out loud. It’s more like a screenplay than a technical or formal document. Use contractions. Use pronouns instead of repeating the same noun over and over. An example, an application confirming an appointment was originally written with a prompt that started, “We’re still arriving at your house on...” It just didn’t sound natural. It was rewritten as, “We’re still on for...”
5. Let go of grammar rules. Don’t violate them for the sake of violating them, but if that’s how people talk, then that’s how you write your prompt. End a sentence in a preposition, split an infinitive, use “their” for singular possession.
6. Gain an understanding of how callers respond to prompts. For example, in asking for a travel date, it’s perfectly natural for the caller to say “the 12th” rather than “June the 12th” whereas for a birth date, that would be extremely rare.

Validation Methods

7. Usability testing – do it. It always turns up something you didn’t expect. And most of the time, it validates the majority of your design.
8. A-B testing is extremely valuable if you have the ability to do it in a production environment. Put two versions of something in place and see which one works better.

Starting the Application

9. Engage the caller in the first few seconds. They will completely zone on you if you don’t get them involved quickly.
10. On the flip side, if the greeting and first question are super short, they haven’t necessarily shifted their focus from whatever they were doing before. Panelists didn’t have numbers to quantify how short was too short, but it has been observed, so watch out for it.

11. Build trust. A great way to do it is to offer a customized experience. Know why they're calling and present that to them. Use their ANI, their past behavior, company-wide issues, anything you have.
12. Avoid legal disclaimers or long instructional messages. They aren't effective here and can be detrimental. Save instructions for just in time help.
13. Prompt for what's on the caller's agenda not the businesses.

This Call Will Be Recorded

14. Don't play it if you're not recording. Turn it on and off if monitoring is intermittent.
15. If it's only the agent interaction that is recorded, play it at the point of transfer so the people who self-serve don't have to hear it at all.
16. Keep it short. "Calls are recorded for quality" says the same thing as the many longer versions that are out there.
17. If you have to have it up front, consider doing it before the greeting. This keeps it from interrupting the natural flow of the interaction.

Modality

18. Caller doesn't know what modality they are going to be using in a given system. Add the modality action required into the first actionable prompt. "Say or enter your account number." "Please answer yes or no."
19. Always give an explicit option to enter sensitive numbers via DTMF.
20. Use DTMF as fall back for directed dialog strategy. Whereas it has been seen to be problematic as a strategy for initial prompts, it has not in this use.
21. On menus you can taper off usage of the word "press." And if you know the user has called several times, you can tighten the prompt up even more.
22. Frequent callers seem to prefer DTMF because they can key ahead – mental map. You can also keep track of modality and prompt the caller for only that modality for the rest of the call. Only issue is that once they get into DTMF it's hard to get back out.
23. Consider turning off speech completely in an application if a caller is having issues. Switch to pure DTMF for the duration of the call.

Language Selection

24. Use separate phone numbers wherever possible.
25. If you have to have a selection, allow all callers to actively choose. Don't make anybody time out to keep going.
26. A great alternative is to tell one language (such as Spanish) to press 9 up front, then launch straight into the first prompt in English. This allows both sets of callers to immediately get into their task. There's no need to pause and wait for the language selection.
27. Allow user preferences to be set and identify them through ANI.
28. In a country with a bunch of different languages (one application had 39!) there is a bigger problem. Can look for area calling from but that can create issues. Some callers might be bilingual and will vary

between which language of choice. If you can't use different numbers, just blow quickly through a DTMF menu selection. In this kind of culture, callers will know to expect it.

Statistical Language Model Prompts

29. The word "briefly" helps get callers to speak the right amount.
30. Give examples but beware. But examples make callers cling to the example. More than two examples sounds like a menu.
31. Randomize the examples call to call.
32. If at all possible, put something easy before the SLM prompt.
33. Use these conservatively. In a lot of cases, there's a way to build a directed dialog version that will work as well.
34. Have a directed dialog back-off menu.

N-best List

35. Don't be afraid of using the list. Hit the back end with all of the data when in doubt.
36. Use backend knowledge to help validate the data. If hitting the back end with the whole list results in multiple hits, use another piece of information to figure out which one is right.
37. Use a matrix when asking for multiple pieces of information. For example, if you gather an account number and date of birth, use each combination of nbest at 1 and nbest at 2 for four possible combinations for the two pieces of information.

Confirmation

38. Often more effective to re-ask the question instead of asking a yes no to confirm a medium confidence utterance. Use a short prompt like "once again."
39. On those medium confidence utterances, if you get medium confidence again, but it's the same thing, take it and run.
40. For a call director, if you're not sure use unique criteria to use as confirmation. John Smith – there are two – is that the one in Dallas or Austin..?
41. Implicate confirmation – Reflecting back what's been heard confirms that heard it and what you heard and opens it up to the caller to say something totally different. Creates mixed initiative grammar issues.
42. A "go back" command allows the caller to self correct a misrecognition.

List Selection

43. If you use "that one" you need to confirm that you got the right one. If they say "no," it was likely a timing issue, so go back one in the list and confirm it.
44. Remembering a number with the choice is a cognitive load issue.
45. In general, put the press message after the item.
46. However, as long as the items are specifically mutually exclusive putting it first can work very well. For example, for account selection. "1-checking, 2-savings, 3-money market." Callers know exactly what

they have and are fine with this because they know the choices. If it's a list of unknown new choices it won't work to put it first.

Don't Do It

47. "Please listen as our options have changes." This message helps nobody. Power users will figure that out in the space of a couple of prompts at most. Infrequent callers don't know what the old ones were. And there's no good way to figure out the ideal time to get it so that everybody affected hears it once.
48. Don't only allow speech when it's perfectly feasible to offer DTMF at the same time. There are obviously some exceptions (like cities).
49. Don't use jargon that's related to your business.

