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# VUI/IVR “Credo”

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## Introduction and overview

Telephone systems (both touchtone and speech recognition) must deliver their interactive information only through sound, an inherently “linear” and sequential medium--- the caller doesn’t have the ability to jump to whatever portion of the interface might seem most interesting or relevant at the time, as s/he would with a visual interface. The system presents a context and some options, and the caller participates by choosing some path through them.

Everything presented in a VUI or IVR must be clearly understood *and easily remembered*, the first time it's heard. As a musician, and as a voice actor, I assess things for meaning, importance, relevance, and relationship to other thing by their sound. I listen for pitch, volume, delivery, pacing, intelligibility, and context. A telephone system's ability to supply all of these parametres is nearly limitless, given modern technology. Surprisingly, though, automated telephone systems are still plagued with poorly-chosen or realized concepts, clunky pacing, and confused phrasing – and they bother me as much on the phone as they do in mediocre music.

While my bias as a musician may lead me to conclude that phrase crafting and editing of VUI systems would be best left to sensitive musicians, (as would the voice coaching when the recordings are made), this is not a practical reality within the industry.. Nevertheless, since a well-crafted aural interface remains that important, in that it advertises a company's attention to detail, and commitment to customer service, it seems to me that perhaps a “credo”, in the form of a series of “how come...?!” questions, observations, or “do’s and don’ts” might prove helpful to fellow VUI/IVR craftspersons looking to create quality and IVR Best Practices.

**Credo: I believe in asking acquaintances of all ages -- and especially retired people -- what's most unpleasant about automated phone systems they've encountered, and then listening to their answers.**

## Cognitive dissonance

**Credo: I believe that no caller should have to “figure it out”, deal with self-contradictory information, or resolved conflicts between what a company says and what it does, when calling an automated phone system.**

1. **If "Your call is important to us", why doesn't somebody answer it?**  
Chances are good that my question could be answered in a couple of minutes by automated self-service, so why must I wait interminably on hold? For those questions that really do require human intervention, warn me ahead of time that there may be a lengthy hold time, then let me decide whether to stay on the line.
2. **What do I do if my perfectly reasonable question doesn't fit into any of your predefined menu categories?**  
Menus often need a "none of those" option, even if it simply leads to another menu. After exhausting a couple of menu levels, though, just admit that the automated system may not be able to help this caller, and transfer them to a live agent.
3. **Menus with way too many choices --- which usually means, "more than 5, at most".**  
After a maximum of 5 menu options at any given level, the odds of a caller even *remembering* all of them, let alone making an informed *choice*, start to plummet. Human short-term memory just wasn't designed to hold that many items at a time.
4. **"Listen carefully as our menu options have changed"...**  
Changed from what?! What if this the caller's first time calling this number? All this sentence does is insult and annoy callers who are *already* listening for the option they think is most relevant, while implying that earlier iterations of the automated system were confusing and disorganized. Is that really the message your company wants to send to callers? If you want callers to listen carefully, just present information, context, and choices clearly.
5. **Offering "leftovers" before the "entrees".**  
Example: The first menu choice offered is "for all general questions", before I get to hear what the choices are going to offer me toward maybe answering my specific question. How am I supposed to know if I have what the company considers a "general" question from the company's point of view, before I make the probably wrong choice? [Example: Arizona Tea, 800-832-3775 --- which also forces callers to listen to ***thirty seconds*** of introductory verbiage before they even hear the unhelpful first menu choice]
6. **If the clock says you're open, BE OPEN AND ANSWER THE PHONE!**  
The announcement on the automated phone systemsays the service department opened at 7 a.m., and the main office opens at 8 a.m. It's 7:30 a.m. now. Why doesn't it give callers any way to transfer to the service department before 8:00?
7. **Be who you claim to be, who you advertise yourself as being, and be about what you claim to be about.**  
Don't advertise a product-support number for one product, then greet the caller with the name of another product, or a company name s/he has probably never heard of before. [Example: 866-297-6682 (866-AW-ROOTBeer) is advertised on a can of A&W Root Beer, as that products Customer Support line. However, the greeting is about Dr Pepper and Snapple. 866-AW-ROOTBEER seems it should be a number dedicated to root beer, even if DrP/Snapple owns A&W Root Beer.
8. **Don't mix metaphors --- this is an aural-only environment.**  
Callers to your VUI o IVR are not "looking for" anything at all. They're using a telephone, a strictly aural environment. They might be "calling to find" their product, to "locate a store", or to "learn more about...", but they're not not "looking for", "looking to find..." or "looking for more information". Moreover, this visually oriented language risks offending and alienating sight-impaired callers.

9. Be accurate, and be courteous.

When caller's goals don't match any of the listed menu options, those callers often make no entry at all, simply waiting for some further action on the part of the system --- perhaps a transfer or further clarification. But far too often, the caller is met with an inaccurate and scolding, "Your entry is invalid! Please try again!", even when that caller didn't enter anything anything at all! [Example: Deer Park Water, 800-288-8281]

## Numbering/timing issues

**Credo: I believe that callers have a right to expect logical and consistent numerical associations, with clear instructions and enough time to follow them.**

10. If it's first priority, or first-most-likely choice, make it the first menu option, not the third or fourth.

Menu option numbers often seem to "jump around" arbitrarily: "Press 3 for this very common and/or important menu choice, or press 1, 2 or 4 for these other, less frequently chosen options." If you want callers to hear choice 3 first, make it choice 1. This more closely corresponds to the way callers will mentally "map" the system's choices.

11. Respond the first time, every time. Don't make callers have to get the timing juuuuuuuuust right.

"For information about an existing account, press 1." The caller presses 1, only to hear, "Please try again! To get information about an existing account, press 1." The second time is successful, so why not the first time? (This is usually a result of incorrectly set timing parameters, and is easily solved in tuning.)

12. Be careful how you ask for, or refer to, commonly used numbers.

"If you know your extension, please enter it now...." Yes, I know my own extension, but how is that relevant when I'm calling someone else?

13. Be accurate, be courteous, and allow callers enough time to gather needed information that they may not have immediately handy.

"Please press or say your account number." The caller does nothing for five seconds, trying to find the paper with my "note number" on it, and the system says, "The note number entered is not valid." What note number entered? Nothing?

There are multiple ways of effectively solving this problem, beginning with simple error prompting: "I didn't hear anything. Please say or enter the account number, one more time." This is seldom enough to solve this problem, though, as it is basically one of insufficient time to respond. Plan your system accordingly, and be sure to test the timing, to make sure it really is optimized for caller input.

14. Make it absolutely clear how callers are to enter currency amounts.

When a caller needs to enter an amount of money on the keypad, how is that done? Does s/he need to enter a decimal point before entering "cents", for example?

## Inflection/tone issues

**Credo: I believe that every caller should be able to clearly understand the tone, inflection, and emphasis of the automated system's prompting --- even if that caller is not a native speaker of the language used by the system.**

15. **Keep the emphasis where it belongs, to enhance meaning and clarity.**

"To repeat this INFORMATION, say Repeat", emphasizing the word "INFORMATION" with a big, unnatural, singsongy pitch variation, instead of "To REPEAT this information". The caller is being instructed to say "Repeat" if s/he wants to hear the information again, so "Repeat" is the word that should be emphasized here, to best ensure the desired caller response (And be sure to provide for barge-in responses, rather than making the caller wait to respond.)

16. **Don't the system develop "multiple personality disorder".**

This can often happen when the legal disclaimer of "This call may be monitored or recorded" is inserted into the system, in a stern-sounding male voice, before the main part of the system even greets the caller, or says the company name. It creates a caller perception that, "Big Brother is watching me already, before the nice lady picks up my ringing phone call?!" [Example: Country Living, 800-888-0128]

17. **Use the correct vocal inflection to convey important information to callers.**

A rising inflection implies continuation, a segue into some other phrase or element. A falling inflection implies finality or conclusion, that there is no more to follow. For example, in a list of three things, don't end with rising inflection, implying that there will be a fourth choice announced next, when there is not. This confuses callers, causing ill-timed "barge in" and recognition errors.

## Prioritization issues

**Credo: I believe that callers should have their goals and priorities given as much or more weight than the company's goals and priorities, in an automated telephone system.**

18. **If it requires its own mention, it requires its own option.**

"For all other options, including the yadda yadda, press 4." If the caller is really calling to find out about the yadda yadda, and it wasn't mentioned in options 1 to 3, couldn't s/he figure out that "all other options" might include it? If the company really wants to promote the yadda yadda, or if it receives enough calls to warrant specific mention, shouldn't it be its own choice on the list? [Example: BJ's Wholesale Club, 800-257-2582]

19. **Don't push. Understand that your priorities or not necessarily your callers' priorities, and they are not calling to participate in a marketing campaign.**

"To be taken off our calling list, press 1", should be the end of it. Don't follow this with a series of marketing messages, an offer of a survey, cross-sell offers for other products/services, or anything that requires additional caller input. Just politely thank the caller and hang up. Forever.

20. **Don't give callers the "run-around". Solve their problems here and now.**

The Web site tells customers to call this phone number for information, then the phone system's first prompt tells callers to go visit the Web site. If callers really wanted to (or were able to) visit the Web site instead, this call would never have been placed. Additionally, recent research indicates that most callers to a VUI or IVR already have visited the Web site, and are calling because their questions were not answered.

## It's a medium of sound, not sight

**Credo: I believe that VUI/IVR systems should recognize that their users cannot see what the system is offering, and must create their own “mental models” of the system. I believe the users’ mental models should be respected by the system, and based on analogies of sound, not sight.**

### 21. Don't use metaphors or analogies that require visualization.

"To go back to the main menu, press pound." Depending on how many levels down the user has drilled, this can inevitably lead to a natural question of, "Now, which one was the main menu, again? And what did it contain?" The menu metaphor begins to break down, because it is inherently a visual metaphor that requires the user to visualize both a "location" ("Where am I, in relation to that 'main menu'? Is the 'main menu' where I want to be?") and structured content ("Does the 'main menu' contain or offer what I want? Will it help me do what I came here to do?")

In brief, the user shouldn't need to visualize any "menus". S/He is seeking service, an answer to a question, or a solution to a problem, not merely a series of "a la carte" choices to be made.

Avoid this visual metaphor whenever possible, instead offering choices such as, "To start over..." or "To hear those options again..."

### 22. Don't assume your callers have everything printed out, collated, at their fingertips, and ready for visual reference. (Or memorized.)

When customers call your company, they're not necessarily looking at any computer screen (and they'd better not be, if they're calling from a mobile phone while driving), or any notes on paper. But, many phone systems assume they have their whole account histories memorized or printed out. (This also related to the earlier issue about allowing callers enough time to find obscure but critical information.)

### 23. Keep the language simple, and don't make callers do calculations or logical constructs.

Remember, your system needs to be written for a spoken medium, and this means avoiding convoluted phrases that...

- ...force the caller to figure out subordinate clauses,
- ...require the caller to think through complicated logical conditions, or
- ...require the caller to perform calculations.

The caller is not looking at the sentences, and can't skip back and forth through their clauses visually to figure it out. The phrases in a phone call come sequentially, at a fixed speed, and must be heard, remembered, and interpreted before being acted upon. Government applications tend to be especially bad at this convoluted stuff, covering all their conditions.

Your application, or your VUI/MIR system, must be listened to before it goes live and serves callers, since it will be serving many people with only minimal education and linguistic skill (on average, about 6th-grade level, in the United States).

### 24. Give callers complete but context-sensitive information.

Playback of address information from a list, shouldn't require callers to guess what city it's in, or wait to find out. Think of the information in the order a person would encounter it while driving and searching for that address: you'll be aware of being in San Francisco, California long before you'll actually pull up in front of 4636 Diamond Street.

So, give the City/State combination first, then let callers choose whether to hear more detail. For example, if a caller is trying to locate a store or bank, don't say, "There's a branch office at 1329 Winnebago Road, Suite D, Bozeman, Montana." Instead, say, "There are two branches in Bozeman, Montana. To hear their address details, say, 'Tell me more', or to hear the next city, say 'Skip'".

[Example: the Toys-R-Us store locator, 800-869-7787]

## Style

**Credo: I believe that every caller has the right to be spoken to with respect for his/her intelligence and awareness that s/he is speaking to a machine, not a person.**

### 25. Don't over-apologize.

The caller's microwave and coffee maker don't say they're "sorry" when s/he presses an unexpected button. Why should their phone handset pretend to be human? It's just a box of buttons.

Avoid overuse of "sorry" or other apologies, saving them for those rare occasions when the company (as opposed to the personified system) actually has occasion to regret, or apologize for, unforeseen complications or inconvenience. For simple error correction, have the system say "What was that?", "Please repeat that for me...", or "I didn't quite catch that..." rather than beginning with an apology that could undermine caller confidence in the system. Then, when the caller hears a true apology ("We're sorry, but hazardous conditions have prevented us from restoring electrical service in your area at this time. Please be assured that we're working on it, and expect to have service restored by..."), s/he is more predisposed to really pay attention and believe that the company is truly sorry.

### 26. It's a computer, not a cheerleader or motivational speaker.

Voices that sound artificially cheery, or not old enough (or not intelligent enough) to route calls correctly can undermine caller confidence in both the system and the company that implemented it. Callers are left thinking, "I hope the company wouldn't hire a real 'airhead' as a receptionist, but why did they make the auto-attendant sound like one?"

### 27. It's a computer, not an undertaker.

This is the "flip side" of #25 above: voices that sound like they have absolutely no sense of humour, warmth, or empathy. Aim for a "middle ground" of sounding caring and competent, without lapsing into cheery or chatty.

### 28. Don't patronize.

It's easy to lapse into using "thank you" as a means of confirming input, but it should be avoided. A recording that tells the caller "thank you" for following instructions and pressing a number can sound patronizing. In most cases, DTMF (TouchTone) input can be assumed to be correct and will require minimal confirmation, anyway, unless the consequences of getting it wrong would be significant, or the number string is long (as with credit card numbers), in which case implicit confirmation can be used. If explicit confirmation is needed, simply state what the system recognized, and offer the caller the opportunity to confirm or correct it.

### 29. Colloquialisms, slang, and humour are very tricky and very personal. Avoid them.

Besides carrying the risk of giving offense, these elements are also difficult to parse, for non-native speakers.

30. **Steer a middle course between monotone and histrionics.**

Excessive amounts of pitch modulation in the announcer's voice will make it all sound insincere. The system begins to sound like like a late-night infomercial --- and will carry just about the same amount of credibility. "Browse on over to" our website...

31. **Don't make promises you can't keep.**

It's surprisingly common to hear automated systems offer options that don't actually go anywhere, instead either generating a busy signal or disconnecting the call altogether. Likewise, if a "virtual hold" feature promises a callback within 24 hours, the call centre needs to ensure that this does, in fact, happen. Otherwise, the company's credibility and reputation are irretrievably damaged.

32. **Don't use jargon, vague, or "inflated" language.**

"We are currently assisting other customers. Your call will be answered in *the order in which it was received.*" If the system already knows how many "other customers" are waiting in line for service ahead of the caller, kept in strict order for turns, it should simply present that information to the caller. If the caller is in line at the post office, s/he can at least see how many customers are waiting ahead, and make an educated guess as to how long the wait will be. The automated telephone system should provide this same information, without dressing it up in overblown "assisting other customers" language. Of course the agents are assisting other customers; that's their job!

If technological constraints require being vague, the system should still be as specific and helpful as possible, without a false formality: "Please hold on, and someone will speak with you as soon as possible. Our people are still helping other earlier callers."

33. **It's a conversation; let it sound like one.**

It's not a sales pitch, it's not a grammar lesson. Avoid pedantry or too "folksy" an approach; either extreme is off-putting.

## Unfocused composition

**Credo: I believe that callers are focused on their own goals and reasons for calling, and the system needs to reflect a commensurate focus and clarity of purpose and navigation.**

34. **Know, and remember, why your callers are contacting this number. Then structure the system accordingly.**

The first announced option in the call is to press 5. The second option is a long ad to go look at their web site *instead of* calling. And finally, the third option is to press 4. Boggle me. [Example: Evenflo parent resources, 800-233-5921]

35. **Don't use a self-service line to advertise.**

Callers are here to get help, not to listen to a sales pitch. This is not the place to trumpet the company's virtues.

36. **Take the time to filter out the impossible and the improbable, before wasting caller's time.**

There has obviously been a recognition or input error of some kind, if a speech recognition system is attempting to process a birth date in 2027. This should immediately be caught, filtered, and corrected before making the caller go through any further steps.

37. Transferring out of the system must be the last time a caller must wait to be transferred --- get the caller to the right place, the first time, every time.

When a caller has navigated through four or five layers of menu options, only to be send to the wrong person and forced to transfer (and wait) yet again, the company will have a very difficult time convincing this customer that s/he holds any value at all, to the company.

38. Let the caller choose whether to receive long, complex, and possibly irrelevant information.

Many phone systems force callers to listen to a long Web address they don't care about. This creates an impression that the company doesn't want people calling them any more, or that they don't want to serve callers unless they're sitting at a computer during the call. The caller has taken his/her own time to place this call; that time must be respected by working to solve the caller's issues during this call.

39. Don't abuse caller's trust, cause them to be suspicious, or make them concerned for their privacy.

Some systems require callers to enter a home phone number before they offer any choices of useful information. Why do they need to know the caller's number at this point? And if they really need it, why don't they simply use ANI to identify the calling number, then ask the caller to confirm?

The fact is, in an age of mobile phones, even the older practice of using ANI to establish location is no longer accurate or reliable, so its use should be declining. There are few other needs or reasons to require a caller to provide a telephone number upfront, unless the line being called is clearly dedicated to accounts or transactions that rely on immediate identification of the caller before proceeding.

40. Don't create unnecessary barriers or "detours" between the caller and the information s/he wants.

"For information on blah blah blah, press 1." I press 1, and then it says, "For information on blah blah blah, please call [an entirely different company name and telephone number]."

The caller will be completely unprepared to write down any of this information, expecting to have his/her issues addressed on *this* call to *this* number (often advertised as the number to call, anyway).

Don't make it the customer's problem when merged companies can't get their own acts together into a well-organized presentation, and don't insist that a VUI or IVR be organized in exactly the same way the company is organized. Odds are very good that the internal company structure will prove all but incomprehensible to the customer, and s/he won't care about it, anyway. [Example: GE Appliances, 800-626-2005]

41. Don't editorialize about your own products or services.

"Are you looking for one of our great products for the U.S. market? Press 2 now to access our Product Locator Services." Most callers are alling because they're *already* familiar with your product, and either need help with it or want to offer an opinion about it. In the case of dedicated sales lines, it can already be assumed that the caller is, indeed, calling about one or more of your products and how to purchase it --- but let your customers decide for themselves whether the product is "great". Resist the urge to make sales pitches via the VUI/IVR.

42. Get to the point --- your *callers'* point.

Don't make callers wait through 15 to 30 seconds of the company's self-congratulatory prose at the start of the call, or how proud they are to yadda-yadda-yadda. [Example: Arizona tea, 800-832-3775.] Your callers are here to get information or solutions, not to attend an internal company pep rally or press briefing.

## Wrong notes, and recovering from finger fumbles

**Credo: I believe that user interfaces --- including VUIs and IVRs--- should work to prevent failure, and minimize the consequences of mistakes, rather than assuming, or trying to guarantee, complete success.**

43. **Make sure all necessary information can be heard.**

When prompt recordings are truncated, either by the system or in the recording itself, important information can get lost, and some of the choices get cut off and make no sense.

44. **Always provide a way to “undo” or correct a mistake in caller input.**

Callers must never feel that there is “no way out” of an action they take, or information they provide. Don't ever force callers to start over, or hang up and call back, simply because they have made an input mistake.

45. **Don't make callers guess what is “correct” input, or use trail-and-error to come up with obscure, “jargon-y” prompts and commands.**

Many systems that are supposedly written for the general public use words a that non-native speaker of English wouldn't know.

46. **Prefer simple Anglo-Saxon words (in English), rather than Latinate words, whenever possible and practical.**

Don't use the verb “access” or “utilize” when “use” would do. Why use “representative” when “agent” would do? Shorter, simpler terms are nearly always better.

47. **Be certain, and help your caller be certain: provide confirmation of critical information.**

“Sorry, there are no store locations near the ZIP code you provided.” Well.....maybe and maybe not I can't be absolutely sure the system heard the ZIP code correctly the first time, if no confirmation is provided. (Another caller might just give up here and assume there really aren't any....) “Sorry, I couldn't find a store near the zip code 9921” is better. Then, I'll know that the reason it couldn't find store locations near my ZIP, obviously, is that I spoke or keyed the first digit too early (interrupting the prompt too soon) and it missed part of the correct number.: 8-9-9-2-1 So, I know it's not necessarily a problem with the ZIP code itself. The same would be true if I had reversed digits, or “fat-fingered” incorrect digits. In a not-found situation it's always nice to know what value it *tried* to use on the database lookup.

## Rhythm and pacing

**Credo: I believe that natural, conversational speech rhythms and pacing are most effective in conveying information to callers.**

48. **Give menu choices at a slow-side-of-normal pace, as you would in face-to-face conversation.**

Menu choices are sometimes offered too quickly and run together almost as if the company is in a hurry and doesn't want customers hearing or remembering these options, to bother the company with them. Callers need time to digest what I just heard, make a decision about its relevance to them, and respond, before the system presents the next option. When is it my turn to respond with an action? [An especially bad example of this: Chicago Tribune, 800-874-2863. Another bad one is CompUSA, 800-266-7872.]

49. Present phone numbers extra slowly and carefully, grouping the digits as they would be written by most of your callers.

When a telephone number is presented too quickly, callers cannot remember or record the information. If the number is given too slowly, callers may try to ‘barge in’, causing unanticipated recognition errors. With all the numbers run together, the telephone number becomes difficult to parse and write. For a North American system, telephone number digits should be grouped as they are customarily written: 3, 3, and 4, with short pauses, the same way *people* speak phone numbers. **Hint:** have the voice talent recording the prompt actually write down each digit as s/he speaks it, not going to the next digit until the current digit has been completely written --- this will give exactly the right speed, because this is exactly what most callers will be doing when they *hear* the number.

50. Give callers time to input TouchTone keystrokes, before the system speaks again.

When using a handset with number pad (as on most cell phones or smart phones), after pressing a choice, users need enough time to return the handset to the ear before the system begins speaking.

51. If the system requires a “terminating keypress”, say so.

If the system requires that callers press pound or hash to terminate an input string, it should say so, as part of the prompt to the caller.

52. Respond immediately, even if the response is only to say, “Just a moment...”

When nothing happens for at least five seconds after speaking or keying in their input, callers are left wondering, “Did I kill it?” In those rare cases where there may be significant lag time before the system can retrieve enough data to act upon it, “punt” by having the system immediately speak some sort of prompt asking the caller to wait. If the lag time is more than a few seconds, play a covering sound or music during the data retrieval process, to signal to the caller that some process is still underway.

53. Provide for “key-ahead” sequences by expert-level callers.

When callers are thoroughly familiar with a system, they should be able to “key ahead” with TouchTone keystrokes and have the system retain and process them, without forcing the caller to wait through every individual dialogue state or conversational turn.

54. Don't make callers wait unnecessarily.

It's not uncommon to have a system offer, “Press 1 or XYZ option. Otherwise, please remain on the line,” followed by very long periods of dead silence for those callers who simply stay on the line. This wasted silence could be bypassed by simply offering another explicit caller option: “Otherwise, press 2.” [Example: Coke, 800-201-2653]

## Technique and approach to telephony self-service

**Credo: I believe that callers expect, and have a right to expect, to have their calls answered 24/7, even if live service is not always available.**

55. Answer the phone!

The company doesn't answer the phone at all; it just rings forever. Are they out of business? In the age of automation, an unanswered phone call is viewed by callers as inexcusable, for a company that is still in business.

56. Remove "dead link" options.

If there are dead choices in the menu, take them out of the menu! [Example: Spirit Airlines, 800-772-7117, where options 1, 2, and 4 all go to a busy signal. Since the only option that works is 3, why doesn't the system simply send the caller straight into that one?]

57. Don't disconnect unexpectedly.

The call gets cut off suddenly while you are on hold or in a menu, and you have to start over.

58. Double-digit TouchTone options are very risky.

If a caller accidentally presses the same numbered choice twice by mistake, the system can mistake it for a double-digit entry, sending the caller somewhere wrong, and forcing him/her to have to start over.

59. Don't just repeat it; it doesn't get any clearer the second time.

When a caller makes a choice that isn't announced on the menu, the system should not just repeat its whole greeting, as if nothing happened. [Example: Teleflora, 800-835-3356. Pick anything other than 1 or 2, and it keeps doing it as long as you're willing to play with it.]

60. NEVER breach caller security or abuse caller trust!

Asking a caller to give a Social Security Number is bad under any circumstances, but it's even more insecure when the caller is calling from a cell phone, or in a situation in which s/he must speak the number rather than keying it in. Companies routinely have a live agent ask for name, phone number, and SSN...and then tell the customer she'll *e-mail all this information* to the right person and have that person call back. Does the company have any idea how terrible a security breach that is?

61. Don't use "press or say [number]." Take the time, and invest the effort, to create a true speech-recognition system.

Speech offers so much more variety and capability than the traditional TouchTone-only system, that many companies are drawn to invest in a speech-enabled system, only to then cripple its capabilities by implementing it strictly as a redundant version of an existing TouchTone system. The most egregious example of this is the all-too-common "press or say..." menus, which still use the arbitrary mappings of numbers to commands, and fail to really make good use of speech-recognition technology.

## Preparation

**Credo: I believe that callers have a right to expect a professionally designed, coded, and recorded VUI/IVR experience.**

62. Use professional voice talent, and have it professionally coached/directed.

Voices that sound like they're reading their lines, at first sight, with no sense of meaning or pacing, are worse than "ineffective". They confuse callers, lengthening calls, involving more CSR time, and costing the company more money. It also tells callers, "We don't value you enough, or take you seriously enough, to do this as it really ought to be done for optimal caller experience."

63. Use a professional recording facility to record the professional voice talent.

There should be no extraneous or background noise during recorded announcements. Get the recordings done by a professional recording artist in a studio manned by a professional recording engineer, not by Sharon in Cube 310 who had fifteen minutes available some afternoon to do them on a phone. Callers notice, and respond to, the quality you build into your VUI/IVR system.

64. Organize menu options in ways that make sense to callers, not just ways that minimize development time or costs.

No menu choice that has four or five different things all grouped into the same TouchTone number is going to prove helpful to callers. More likely, it will cause enough confusion that they will encounter high error rates at this point in the call flow, and “error out” to much more expensive live agents. [Example: Eureka, 800-438-7352]

65. Don't make callers have to provide information more than once --- if your VUI/IVR system cannot provide “information passing” capability, then it is not ready to go live. Period.

Imagine yourself in your callers' place: you enter your account number, wait on hold for what seems a very long time, and when you finally reach a live person, they ask you for all of the information you have already provided, all over again. Yes, this item is strongly worded, but from the caller's perspective, there is no worse “cardinal sin” in an automated system. Don't do this! Ever. Period.

66. Don't “trap” users.

Callers should easily be able to tell, at all times:

- Where they are, within the flow.
- Whether or not it's where they wanted/expected to be.
- How they get here.
- How to get out.

67. Avoid making callers “pogo stick” through menu levels to do what they want to do.

Many systems require callers to drill deep down into a menu before discovering that it is not going to address their needs. By this point, the caller needs to “pogo stick” his/her way back up that menu's levels, then move to another menu and once again drill down. Planning the system more thoroughly during design phases will help prevent this (it's not always entirely avoidable), presenting callers with multiple ways to get to the information they're seeking without “pogo sticking” their way through the system.

68. Tell users what they'll need to be successful and get the most efficiency out of this call.

If the call will require users to have a membership card, recent invoice, or other detailed information handy the system should tell them that up front, and provide a means of waiting for them to locate the information.

69. Match cardinals (1, 2., 3....) and ordinals (1st, 2nd, 3rd...) in menus.

Avoid skipping numbers, or setting up a menu with choices 1, 2, 5. This leads to high rates of error, because the cardinals assigned to each choice do not match that choice's ordinal position within the list, breaking users' mental models. In turn, this will require extensive error recovery capability for this dialogue node, which could be avoided by simply matching cardinals and ordinals in the menu.

## Presentation and perceived persona of the system

**Credo: I believe that companies have an obligation to their callers, to create VUI/IVR systems that present cohesive user experiences that reflect an accurate portrayal of the company as a whole.**

70. Use the same voice throughout the system, switching voices only when switching languages.

Voices that don't match, across various portion of the system, or even on different choices in the same menu, sound amateurish and “cobbed together”, leading your callers to wonder about the quality of the rest of your company's offerings..

71. **Live agents must extend and continue a pleasant VUI/IVR experience.**

Any pleasant and well-designed caller experience in the VUI/IVR is completely destroyed and negated, if when caller reaches a person, that person sounds bored, hostile, or aggressive.

72. **Use professional, native-speakers of the languages you plan to incorporate.**

Spanish menu prompts spoken phonetically by an obviously non-Spanish speaker, at the point where the caller is supposed to choose a language to continue, makes it sound as if the company doesn't sincerely want Spanish-speaking business, or that the company is willing to cut corners wherever it can, including customer service. [Example: Target, 800-591-3869, then 2 for local store.]

## Attention to detail

**Credo: I believe that callers deserve to interact with a VUI/IVR in which a company did take the time to “sweat the small stuff”. I believe that this investment of attention to detail not only creates better caller experience, but will pay off in increased customer loyalty and business for the company.**

73. **Test the system before deploying it. Don't ask your customers to be your Q.A. Department.**

This should include load testing, unit testing, path-traversal testing, and usability testing, as well as a small-scale “pilot” deployment to check for unanticipated real-world issues or problems.

74. **Users don't care about your “recent menu changes”.**

Asking a caller to “please pay attention” is patronizing, and treats the caller like a child. You've already lost their attention, at that point. Check with your legal department to see whether a “may be recorded...” disclaimer is necessary --- is there any caller who does not know, by this time, that his/her calls may be monitored or recorded? If the disclaimer is deemed necessary, consider grouping it with additional “legalese” (for example, a Privacy Policy), and offering callers the option of hearing all such information before proceeding. (Be careful to make it clear, however, that skipping such playout is equivalent to agreeing with the policies listed there.) If your opening greeting sounds more like the opening statement of a courtroom trial, you've already lost your caller's attention.

75. **Avoid making callers agree to disclaimers, waivers, or any other intimidating legal agreements, before proceeding through the call.**

Spoken disclaimers that the caller has to agree to, pressing some keystroke of acknowledgment, before the call can continue, are distressing and intimidating, and send a message of, “We don't like you, value you, or trust you. Go away and quit bothering us!” And that's exactly what many customers will do, rather than continuing the call.

76. **Keep time-sensitive announcements up to date, and remove them once they're stale.**

Emergency recorded messages can be very helpful, especially for utilities, but don't forget to take them out when they no longer apply. A stale message implies carelessness on the part of the company, in the caller's mind. And, it immediately loses the attention of every caller who doesn't care about that emergency issue.

77. **If your system is DTMF-only (TouchTone), be sure to ask whether the caller can safely use his/her keypad to interact.**

Callers who are calling from a car, can't press a series of buttons safely. They can't keep looking at the keypad either, because their attention has to stay on safe driving. The only reasonably safe thing to do, instead of hanging up, is to get to a live human with the fewest possible buttons pressed. Act preemptively, by asking the caller whether s/he can safely use TouchTone keys and, if not, transferring the call to a live agent. This

approach will help avoid having callers simply bypass the system by always pressing “0” for a live agent, while still allowing callers to call from hands-free environments.

## Self-absorbed perspective, ignoring the audience

**Credo: I believe that the focus of IVR/VUI prompts should always be on the caller’s perspective and goals, and only secondarily on the company.**

78. “Your” does not mean “our”.

Be careful not to tell callers to enter “your ZIP code”, if what the system actually means is, “Enter the ZIP code of the place you want to find, want to start new service, or are currently located.” Callers will enter their own home ZIP code when asked to provide “your” ZIP code

79. Consider driving time, not just distance. Your rural customers will thank you.

Linear distance isn’t always the most accurate measure of a “nearby” location. Driving time can also be a significant factor, even in metropolitan areas. In more rural areas, callers simply *can’t* get to a city in half an hour. Plan the system to provide information on which locations can be reached most quickly, not just how far away they may be.

80. Let callers enter dates in ways that make sense to people, not just to computers.

This may mean needing to parse the date and prompting into separate “chunks”, to make it easier on callers. But to have to enter someone's birthdate in a confusing format such as "030840" is extremely error-prone, especially among elderly callers. Invest a couple of days programming it

81. Don’t just “set it and forget it” --- test often, to ensure that the system is working properly.

Don’t rely on your customers or your IT department to identify system problems. Have dedicated QA staff test the system at regular intervals, so that problems can be corrected before they have significant impact on the business.

82. Be specific, especially when making promises to the caller.

If a message tells callers that someone will call me back, say when the caller should expect the call, even if it’s just an estimate. The caller needs to be able to plan for the callback, with minimal disruption to his/her own day.

83. For outbound dialers, give callers a quick, easy, and effective way, during this call, to get off the calling list

Callers must be able to trust that removing their contact information from a calling list will be honoured by your company.

84. Better an automated system that will listen and respond, than a live person who does nothing but ask callers to “Please hold”.

Any business that is so busy that it must have a live person answer incoming calls with, "Thank you for calling Spud's, please hold!" without the caller getting to say even a single word, is a business that can afford to implement a simple phone system. It could greet callers calmly and queue them up for live service, or provide limited self-service right within the automated system. The machine could say: "Hello, thank you for choosing Spud's. Someone will take your order as soon as possible. Our people are still helping an earlier caller. While you're waiting, would you like to hear our specials? You can press 1 at any time to *hear those.*" (Pause; then some *gently pleasant* hold music, preferably instrumental.) That, or Spud's should hire enough employees to keep up with the call volume.

85. Business hours are never “priority one” in a menu. This is why your business has a 24/7 automated phone system.

The web site, where callers likely got this phone number, already showed them the office hours. They're usually calling because we have a problem with a product or service, and need help the Web site can't give directly. They're calling *during* office hours already, deliberately, in the hope that we'll get to a helpful person.

One alternative is to alter the menu, so that the office hours are choice 1 only when the call is coming in within 90 minutes of closing time, when callers are deciding if there's time to drive in yet today before the business closes?

## Transitional cues

86. Let callers know when they are leaving this system for another one.

“To find our stores near you, press 7.” The caller presses 7, and the system rings some other system without warning, causing the caller to wonder, “Is it dropping my call? Sending me to a person for generic questions the computer can't handle? What?” The system should at least say something in transition, such as: “I'll send you to our Store Locator system. If you want to know that direct phone number for your future calls, press 1. Otherwise, I'll just transfer you right now.” (One second pause, then transfer.)

87. You know what company the caller has reached. S/He may not.

Be sure that your initial greeting always includes the company name, so that the caller knows that s/he has not misdialed or called a phishing scam, and has reached the intended target.

88. Provide an “earcon” to cue transfers from the queue to a live agent.

When a call comes off a hold queue and is being answered by a live person, it's nice to have some little sound (an “earcon” in industry jargon) indicating it's about to be picked up. While waiting on hold, callers frequently put the phone down on a table or onto speakerphone. The sound tells them it's time to pay attention to the phone again.

89. Consider providing an “express lane” series of very terse “expert” prompts for frequent callers.

Callers who call frequently and who have learned how to get to what they want should be able to do it as quickly as possible.

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