

### Introduction

Today's average chatbot is about as intelligent as the famous dog Lassie: it can recognize simple patterns, follow a score of simple commands, and parse a handful of parameters from a command. As a designer, you want your customers to be impressed when the dog understands their voice, not become emotionally entangled.

Source: <http://www.speechtechmag.com/Articles/News/Industry-Voices/Top-5-Tips-for-Designing-Chatbots-127109.aspx>

### 1. Be Businesslike

While you can give your bot a sparkling personality, this is not necessary (and most of the time detrimental to the overall user experience). It's OK to be straightforward, businesslike, and to the point. Most bot tasks will be mundane and not particularly exciting.

**Do:** Thank you for calling ACME Widgets. How can I help you?

**Don't:** We are so glad you called! Say: "Let me know about your awesome widgets" to learn about the amazing widgets we make.

Say: "I need help with my widget" to get help with your widget. But please don't say "I want to speak to a human," because you will just upset me.

### 2. Ask for What You Need – and Stop Talking

If you need to collect information, ask a simple question, then, please stop talking and listen to the answer.

**Do:** I think you are asking for a representative. Is that right?\*

**Don't:**\*\* I think you are asking for a representative. I'm so disappointed. But I think that's OK, lots of people do. That's what you are asking, isn't it? 'Cause it's OK if you want to look up your Widget Plus account – that's our most popular option

### 3. Set Expectations on Duration of Interaction

Most people are busy and distracted. It's best not to lay too many of your options on their already troubled mind. The best practice is to list no more than three options at a time, and then ask if the customer is ready to hear more of your bot's brilliance. If your list still sounds like a run-on sentence, try inserting longer pauses between choices. Amazon recommends 350ms for simple choices, and 400ms for choices requiring more consideration, and 500ms for procedural steps.

#### Do:

Here are three steps to replacing a lightbulb. [half-second pause] First, turn off power. This is very important – do not skip this step. [half-second pause]

Now that the power is off, remove cover and unscrew the lightbulb counter-clockwise from its housing. Discard the old lightbulb. [half-second pause]

Finally, screw in the new lightbulb, turning it clockwise in the housing. Pat yourself on the back – you are done

### 4. Avoid Repetition

Human conversation always involves some variety. To maintain the illusion of life in your bot, to at least the level of a TV politician, use a variety of prompts. This is easy to do in Alexa, but takes a bit more effort in custom stand-alone bots. Either way, it's time well spent:

**Do:** What widget would you like to buy?

**Do:** What widgets are you most interested in?

**Do:** Which widget do you need more information on?

You can use Speech Synthesis Markup Language (SSML) to insert inflection and emotion, strategically lengthen the pauses, and add many other minor but useful variations into your bot's voice. Here's the SSML code that casts Alexa in the role of Agent Smith from the famous movie monologue in The Matrix:

```
<amazon:effect name="whispered">I'd like to share a revelation with you...</amazon:effect> <break time="2s"/> Human beings are a disease, <break time="1s"/> a cancer on this planet. <break time="1s"/> You are a plague, <break time="1.5s"/> <prosody volume="x-loud">and we... are <emphasis level="strong">the cure</emphasis>.</prosody>
```

You can get more information on Alexa's current capabilities in Amazon's SSML reference. This is one of the hottest areas of research, so expect rapid progress in the next few years.



### 5. Design from Zero

To create a really satisfying experience, you should strive to “design from zero” – that is, assume the epic fail condition as inevitable, and try to come up with ways to prevent errors, and recover from errors quickly when they occur.

One opportunity to shine is by addressing the problem of common names. Map the frequently used synonyms for at least your top hundred queries, or for key elements of the commonly used lists. There is no need to correct your conversation partner outright. A little kindness delivered via gently restating the task at hand will make people feel smarter, and go a long way toward turning your users into fans:

**Human:** Book a vacation in Holland.

**Bot:** The most popular time to go to the Netherlands is in the spring when the famous Dutch tulips are in bloom. When would you like to go?

**Human:** Play the love theme from The Godfather.

**Bot:** Playing “Speak Softly Love” by Andy Williams

If we accept failure as a given, it turns from a cause of despair into a golden chance to differentiate your product. Design-from-zero thinking applied to your bot’s design might just convert reluctant users into inspired advocates of your product or service.

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