



Conversational Microwave Interfaces

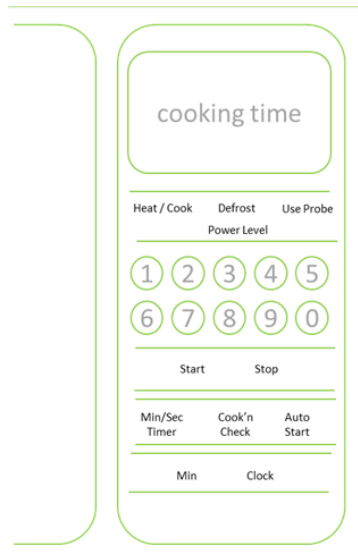
A UX PUZZLE FOR THE BRAINY

Theme

Most of us, including me, don't spend a lot of time designing conversations with voice input and audio response. But as UXers, we know some of the considerations involved. In this puzzle, we explore some of the challenges in designing for this type of conversation that will position us well to participate in this type of design.

Challenge

A technology innovator wants to provide a conversational interaction with microwaves, replacing the classical analogue control panel shown below with voice input and audio response.



The implementation might be a dedicated voice activated microwave or a voice activated central panel in the smart kitchen. The microwave may be web connected for full natural language processing, or may have limited voice interaction using a fixed input vocabulary.

What types of conversation (interaction) takes place between the user and the product? Think about how these are reflected with the different speech recognition options. Choose one implementation and come up with a provisional design. How would you prototype your design? Assume initially that there is no visual interface at all; look for usability issues with this extreme black-box approach and see whether it would be useful to have a few visual elements on the microwave itself. What would they be?

Pointers

The approach is similar to the one we took for [Digital Microwave Interfaces](#).

1. Look for the conversational elements that have to be supported. We identified some elements in the Digital Microwave Interfaces puzzle, namely: ENGAGEMENT, ORIENTATION, GUIDANCE, TAKE ACTION, FEEDBACK, EVOLVE. There are more.
2. Look for ways that these conversational elements can be implemented.



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Here are some examples.

Consider the very start of a conversation, with a user approaching the black-box for the first time. There is a state of low user knowledge.

I approach the microwave to see what it can do for me. I have no idea how to communicate with it.

Imagine that you were at a party and wanted to start a conversation with one particular person. What ways would you try? Do these help with your design?

Once communication has been established, how do we find out what functionality exists? In the digital microwave, we can see a menu of functions available to us, in order of anticipated use. Think about the conversational equivalent.

The microwave says to me "I can heat and cook things, defrost frozen items ..."

This description is wordier than button labels; why might longer phrases be helpful?

With text, we can indicate that certain words are actionable.

I can heat and cook things, defrost frozen items ...

and even click them before we have finished reading the entire sentence, as soon as we recognize an action we want. What equivalents could there be in the conversational approach?

Finally, consider an explanation about how to use the probe to cook food to a certain temperature. This is a large chunk of narrative. How could we package it into smaller pieces and allow the user control the pace of presenting the information? How could we re-use this information to guide the user through the process of using the probe as they actually cook food to a given temperature?

This puzzle turns out to be large and nuanced, regardless of whether or not we use Natural Language Processing during the input.

Have fun with this one, and don't forget to use the lessons from the first two puzzles.

Good designing!

About the Puzzles

These **puzzles** show how, by taking the user's point of view, we can generate ideas and select the best ones, innovate, avoid pitfalls, and generally make better thought-out user experiences. They are a fun way of presenting serious ideas about designing information rich solutions. For a more serious and systematic way, see "Experiencing + Architecting Information" at www.theinformationartichoke.com.

To bring this type of training into your organization or educational institution, contact Martin at theinformationartichoke@gmail.com