

perpendicular angel design

organizing and simplifying, one illumination at a time

AN EVENT APART OT 2021: ELEMENTS HEARD NOT SEEN BY PRESTON SO

Next up: Preston So and his talk Elements Heard, Not Seen. Because this year I used Twitter's threading / topics feature, it's giving me 2 tweets in each embed I do here. I'm embedding every other tweet for readability. There's a PDF at the bottom of the page in case this all collapses.



zeldman 
@zeldman



👑 Next at [#AEAOT](#), Oracle Sr Product Strategy Director (and [@ABookApart](#) author) [@PrestonSo](#) helps us transition to voice design—using familiar web elements + emerging affordances.

[#ux](#) [#design](#) [#VoiceUX](#) [#VoiceDesign](#) [#WebDesign](#)



3:29 PM · Oct 12, 2021

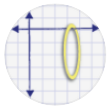


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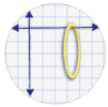


Anne Gibson @perpendicularme · Oct 12, 2021



Replying to @perpendicularme

This talk is about moving from web design to voice design. You know how your website looks. How would your website sound if it were actually a voice interface? [#aeaot](#)



Anne Gibson

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Designing for voice interfaces has no visual canvas. How do we actually design for voice interfaces? Our skills are biased toward the visual web. [#aeaot](#)

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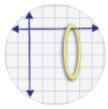


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This talk will cover:

Voice css the web: verbal over visual.

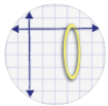
Moving our design thinking from web to voice.

Writing effective voice dialogues.

Crafting effective voice interface flows.

The new design problems in voice.

[#aeaot](#)



Anne Gibson

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When you create a voice interface, no matter with it's based on, there are 2 things that matter most:

1. a set of dialogs
2. voice interface flows that outline the structure and how users journey across the interface. [#aeaot](#)

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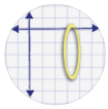


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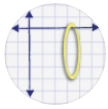
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Conversation is not a new interface. Erica Hall wrote conversational design for a book apart a while ago.

Voice interfaces are unique because they employ our natural instincts over acquired skills. [#aeaot](#)



Anne Gibson

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in voice, machines are playing on our terms, not us playing on machines' terms.

Screen readers are very very different from voice interfaces. Readymade verbal implementation of websites are not the same as voice interfaces.

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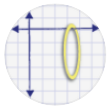


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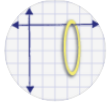
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Screen readers are fundamentally a second class citizen - it's not a first-class experience. Designing for voice is about making a first-class aural interface, not a second-rate hybrid interface.

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Designing for voice interfaces means writing natural dialogue and structuring natural flows.

Many of us are not starting from scratch. We're converting existing content and sites into voice interfaces.

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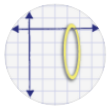


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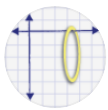
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First reorient your design thinking away from artificial visual elements and toward natural verbal elements.

Dialog is our first tool for that. 4 elements of dialogue:

- Onboarding
- Prompts
- intents
- responses

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The thematic element of the web (pages, formatting, links, calls to action, forms, alert boxes, etc.) all map to the voice elements of onboarding, prompts, intents, and responses. They're called utterances.

all elements in web design have equivalents in web flows. [#aeaot](#)

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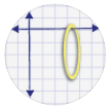


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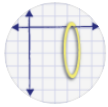


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all elements we enable in web design have equivalent in voice flows [#aeaot](#)



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2. Reorient your design thinking away from visual documents and space toward aural events in time. We need to have a shift from how information occupies space to how it occupies time as events. [#aeaot](#)

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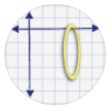


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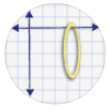


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Web events - view, click, tap, hover, scroll. In voice we only have 1 event, which is what the voice interface will do in response to what we say. Decisions the interface makes. [#aeaot](#)



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Flows - call flow diagrams - are the way you work through a voice interface.

series of elements that are moving between elements that we do on a regular basis. shows how we move between elements and how decisions are made.

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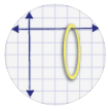


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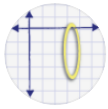
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these are very similar to user flows and flow interfaces, but they are much more finer grained than user flows usually work.

[you are doing user flows with your wireframes, right? they will save your bacon.] #aeaot



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georgia.gov has a very accessible website that also breaks down nicely into categories and a strong hierarchy.

First we need to write a dialog to break down that content.

First we have a topic and what you should know about it.
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Georgia.gov
georgia.gov

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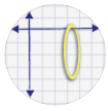


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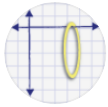
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[He's doing a dialog writing demo, will do my best to capture it.]

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If we're looking at this from a web browser, we just scroll down the page. but we can't present a whole page in a voice interface. and if you're building a transactional interaction, you can't 'display' everything on the page. so we have to split this up into elements. [#aeaot](#)

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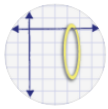


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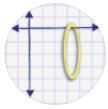
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A sample dialog: the system provides small snippets and the user says yes/no - lots of questions that help the user determine where the answer of their specific question is. then there's further utterances to share the exact information.

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a single sample dialog represents a single way to go through the flow diagram. multiple sample dialogs make up a single call flow diagram.

key takeaway: two tools for voice dialog. Dialogs and flows. You can't build one in isolation from another.

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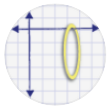


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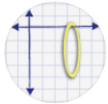


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What does it mean to write an effective dialogue?

Typical onboarding is using the title or a header element and an intro paragraph that came from a website, focusing on what the most important information on the page is.

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keep your voice onboarding relatively short because your title and intro paragraph are relatively short. Do not cause the user's eyes glaze over. The user can't scroll past your voice dialog.

Be very clear about what the user can do and what you do for the user. [#aeaot](#)

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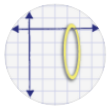


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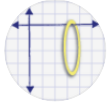
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Text formatting is reflected in voice interface in the format of conversational markers and other cues in the form of sound gestures to inflect and modulate how text sounds to users.

There's no visual screen or tactility to leverage. [#aeaot](#)



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Keep it short.

Keep it natural.

Design for ambiguity. The more abilities in a dialog the more difficult it is to conduct the conversation.

Support corrections.

Timing is important. Silences can sound very unnatural.

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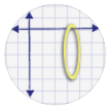


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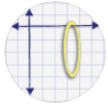


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Converational markers are linguistic elements that bind together chunks of conversation into a cohesive narrative.

Temporal markers
Acknowledgements
Affirmitive feedback

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Anne Gibson
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Prompts are ways to fill out forms. On the web those are links, buttons, forms, inputs, text areas. in the voice interface it's questions that the system asks, or directions like "feel free to ask a question". Giving suggestions like how to respond is great. [#aeaot](#)

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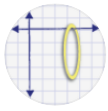


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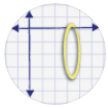


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The only way for a voice interface to understand a user's goal is through the user's utterances. We have analytics on the web that we can interpret for intent. If the user asks how to renew the license, the interface has to understand a question and provide an answer. [#aeaot](#)



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When providing information back, ask "does this sound helpful?"

Intent identification is the process of understanding what the user wants when it's ambiguous or uncertain.

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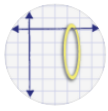


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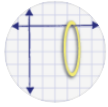
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What about modals? things that usually display errors or similar information? "Sorry, I didn't understand. Ask me a question related to the state government of Georgia." Visual elements in an aural form.

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Events that occur in a website - what makes up a call flow diagram. Phone hotlines, etc. all use call flow diagrams. Decision states are where the interface presents you with a prompt and then reacts to your response. [#aeaot](#)

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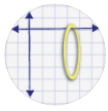


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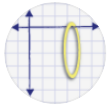


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Moving between links is very similar to moving between decision states. These can also be fields on a form. [#aeaot](#)



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Moving from one decision state to the next is how navigation through the system works. Prompts on the left and responses on the right gives a very clear way to read the decision states. [#aeaot](#)

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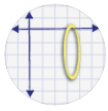


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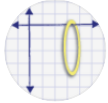


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Reecursive decision states are when someone does something like fail to complete a required field. you can move on when you complete the required form, but you loop around it until you give them something they can work with. [#aeaot](#)



Anne Gibson

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What do we do with menus and lists? Voice menus are essential for identifying user intent, but they can't present as many verbal options as visual menus.

[You should probably cut down your visual menus too. I have opinions!]

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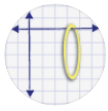


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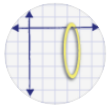


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Menu with a complicated list, you may need to iterate through the results to find out what they want. Recursive states iterate through lists and menus. [#aeaot](#)



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Multiple dialogs brought in together allow you to create a flow diagram based on those dialogs. Prompts, responses, and recursive elements all us to bring together a set of use cases and dialogs for users.

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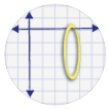


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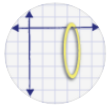


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One problem with screen readers is that the visual hierarchy is already settled. In voice interfaces you can be a lot more flexible. Focus on the events that occur - how do you move from point to point? [#aeaot](#)



Anne Gibson

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The new design problems in voice:

Perceived identity and implicit biases are a problem. We picture people when we hear Alexa or Siri speak. They're generally personified as cisgendered white women with standard American accents.

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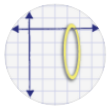


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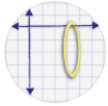


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The new design problems in voice:

Perceived identity and implicit biases are a problem. We picture people when we hear Alexa or Siri speak. They're generally personified as cisgendered white women with standard American accents.

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The conversational singularity will make voice interfaces indistinguishable from natural human conversation.

Websites can fall into very easy set of paradigms for their interactions. At what cost does conversational singularity occur? [#aeaot](#)

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