Card Sort Results

Feb 2024

Overview

- Activity to Sort [Outcomes from the Fall](#) into Categories
- 16 people completed it
- Participants created a total of 280 categories, with a median of 16 categories each.

Organising Information: Information Architecture

- There will be no perfect structure
- It is about best match
- An grouping based on averages is the worst,
  we're trying to understand people's mental model
- We have started bottom up, now we iterate from top-down
- Tagging will help, but a good default structure will help organise our work
- Related: Silver Research Summary
  - **From Bentley Study: Organize the material in the ways that people who use them think about them in the context of the development lifecycle. "**Could they be organized in a way that you could determine when to think about them? For example we marked them by role (content, design, developer, tester) so the role who needs to learn it can focus on the guideline but if someone is a content writer they don't need to learn the design and developer guidelines."

Categories

Things user's can/should be able to do:
- Content resize
- Task completion
- Text manipulation

Type of interaction:
- Input
- Keyboard /agnostic modality
- Layout and approach
- Memory
- Motor needs
- Physical interaction
- Perception / visibility
- Pointer
- Processes & Data entry
- Workflow sequence

Discipline:
- Interaction design

Type of content/interface targeted:
- Accessible forms
- Audio and visual
- Content on hover
- Content meaning
- Control and focus appearance
- Design, layout and Hierarchy
- External content
- Errors and feedback
- Focus states
- UI elements
- Images
- Input types
- Interactive elements
- Manage distractions
- Media accessibility
- Motion
- Navigation
- Cognitive tests
- Non-text content
- States and updates
- Status and purpose info
- Images text alternatives
- Text presentation
- Timing and interruptions
- Video
- Visual design
- Tasks and processes
- Timing
- UI controls
- Use of colour
- Video
- Visual layout
- Wording and terminology

What to provide, or not provide:
- Accessible AI
- Accommodations
- Affordances and consistency
- Alternatives
- AT Support
- Content alternatives
- Content structure
- Content writing
- Understandable content
- Design minimums
- Enough time
- Input support
- Keyboard accessibility
- Manage distractions
- No cognitive tests
- No manipulation
- Non-visual alternatives
- Organisation of content/interface
- Prevent distractions
- Prevent harm
- Privacy
- Protect from harm / exploitative behaviours
- Provide help
- Readability
- Safety
- Structure & meaning / semantics / organisation
- (User) Support
- Support input devices
- Text alternatives
- Text clarity / presentation
- Undo
- Usability aids
- (User) control & freedom
- (User) Personalisation

Dendrogram View 1

- Prevent Harm & Deception
  - 3rd party content presentation
  - Social media algorithms
  - Feedback
  - Privacy
- Controls
  - Control Location
  - Controls distinguishable
  - Controls vs Non-controls
  - Indicate interactive
  - Visually Distinguishable Controls
- Consistent Control Design & Interaction / Navigation & Orientation
  - Behaviour of controls
  - Clear starting point
  - Consistent navigation
  - Control names (accuracy)
  - Visual indicator for change of context
- Processes and data-entry
  - Adequate time
  - Contextual help
  - Input instructions provided
  - No cognitive tests
  - Reduced task distractions

- Clear Language / Wording and Terminology
  - Ambiguous terminology
  - Paragraph length
  - Uncommon words
  - Verb tense
- Non-text content / Media Alternatives
  - Audio and text descriptions
  - Captions
  - Image text alternatives
  - Decorative / informative equivalent
- Structure & Meaning / Organization
  - Descriptive section headers
  - Order supports understanding
  - Related content
  - Subsections
- Design, Layout, & Hierarchy (low score, close to Color/typography/contrast)
  - Visually distinguished sections
  - Programmatically distinguished section
  - Clear relationships

- Support Input Devices
  - Control states
  - Change focus with pointer input
  - Gestures and dragging
  - Keyboard only
  - Target size
  - Focus indicator
- Color, Typography & Contrast
  - Adaptable line length
  - Contrast of visual information
  - Maximum text contrast
  - Minimum-sized text
  - Reflow
  - Virtual cursor
- Adaptability & Customization
  - Adjust color
  - Control distractions
  - Motor fatigue
  - Notify on change
  - Text orientation
  - User settings
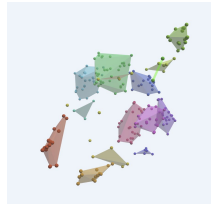
Odd ones:
- Supplements to aid understanding of numerical concepts
- Citation (Visually and programmatically cite the source of the interface and primary content)
- Related Information: Information required to understand options is adjacent.

Dendrogram View 2

- Prevent Harm & Deception
  - Algorithm bias
  - 3rd party content
  - Privacy
  - Avoid Manipulation
  - Sourcing
- Controls
  - Consistent control design
  - UI elements
  - UI Controls
- Orientation
  - Current location
  - Focus retention
  - Consistent Purpose
  - Relationship of labels & controls
- Process and Task Completion
  - Process & Date Entry
  - Cognitive Load
  - Task Completion
- Clear Language/Content
  - Clear Language
  - Default Content
  - Wording & Terminology

- Alternatives
  - Non-text content
  - Alternatives
  - Media alternatives
- Structure & Organization
  - Structure & Meaning
  - Structure & Organization
  - Design, Layout & Hierarchy
  - Content Organization and Navigation
- Input Support
  - Support Input Devices
  - Input types
- Color, Contrast & Typography
  - Visual needs
- User Control/Adaptability/Customization
  - Adjust color
  - AT Control
  - Customization
  - Control Distractions
- Help & Documentation
  - Help & Documentation
 - User Support
  - Provide Instructions

Comparison

Option 1	Option 2
Prevent Harm & Deception	Prevent Harm & Deception
Controls	Controls
Consistent Control Design & Interaction / Navigation & Orientation	Orientation
Processes and data-entry	Process and Task Completion
Clear Language / Wording and Terminology	Clear Language/Content
Non-text content / Media Alternatives	Alternatives
Structure & Meaning / Organization	Structure & Organization
Design, Layout, & Hierarchy	[Included in Structure & Organization]
Support Input Devices	Input Support
Color, Typography & Contrast	Color, Contrast & Typography
Adaptability & Customization	User Control/Adaptability/Customization
	Help & Documentation

Comparison (Adjusted to compare categories)

Option 1 (Type of Content)	Option 2 (What to Provide)
(Prevent Harm & Deception)	Prevent Harm & Deception
Controls	Provide usable controls
Consistent Interaction / Navigation & Orientation	Help user orient
Processes and data-entry	Support Processes and Task Completion
Clear Language / Wording and Terminology	Provide Clear Language/Content
Visual and Auditory Alternatives	Provide alternative formats
Structure & Meaning	Organize and structure content
Design, Layout, & Hierarchy	[Included in Structure & Organization]
Input Agnostic	Support Input
Color, Typography & Contrast	Distinguish content through contrast & clear typography
Adaptability & Customization	Support adaptability & customization
	Provide help & documentation

Next steps

Analysis of
categories

Emergent
Categories

Recommended
Categories
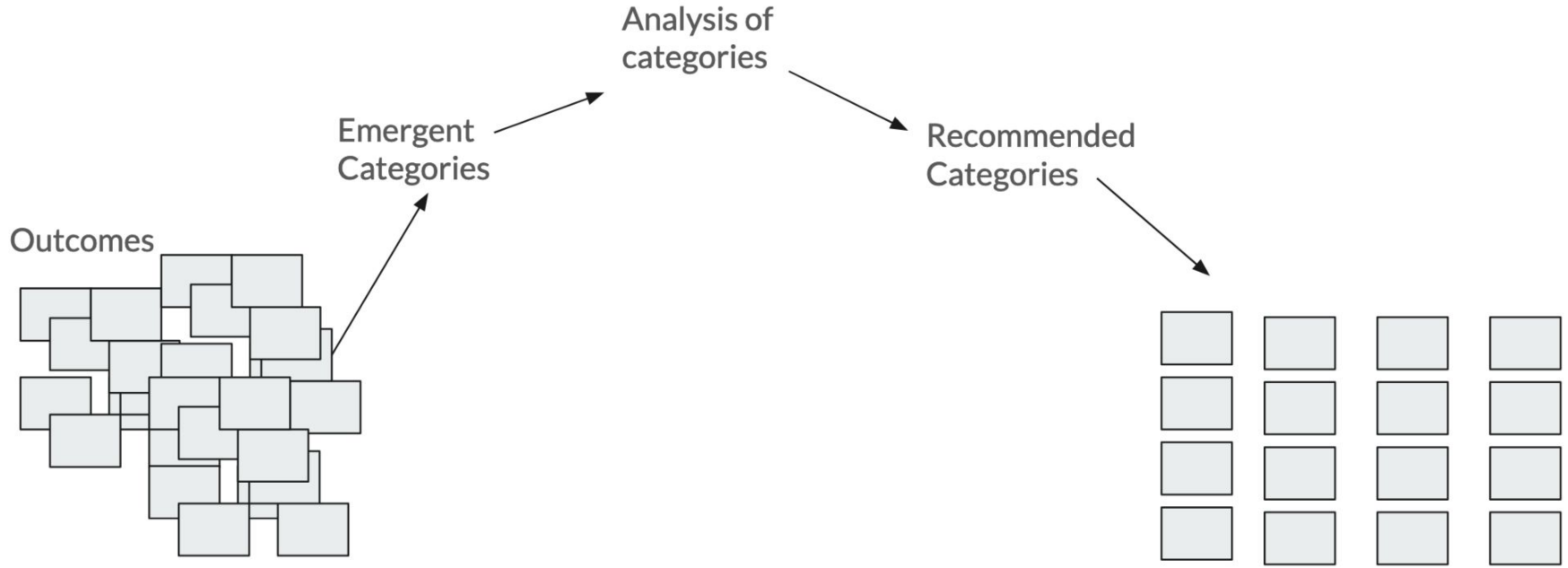
Outcomes

Card Sort

Part 2

Looking at the problem "top down", how well did the structure work?

Refining for a top-down card sort

With categories established, we will setup another card sort, this time a "closed" card sort".

The list of the outcomes is the same (or a sub-set), but the categories are pre-defined.

When people select from a 1-level menu for each item and are correct 1st time:

- Over 75% is excellent
- 66% is reasonable
- Under 50% means you probably want to re-think it.

I thought over 30% of the items had multiple possible locations.

Overlap issues

A few examples of overlap, such as:

Outcome: "Clear control purpose: Provides controls whose purpose is clear"

Design, layout & hierarchy	Controls	Wording and Terminology	Structure and meaning

Overlap issues 2

"Clear input: Makes it clear when user input or action is required (to complete a process)"

Design, layout & hierarchy	Input agnostic	Processes and data entry	Wording and Terminology

"Non-Text Contrast: Visual information required to identify user interface components and states meets the 'colour contrast threshold', except for inactive components or where the appearance of the component is determined by the user agent and not modified by the author"

Design, layout & hierarchy	Color, Typography & Contrast

Working up an alternative (1)

Looking at the 60+ cards with obvious overlap:

- Where the requirement is to add something (e.g. add help, conversation support) that wasn't multimedia or preventing harm, there is no obvious category.
- "Navigation & Orientation" and "Design, layout & hierarchy" overlap, a lot.
- "Controls" and "Input agnostic" have a lot of overlap (e.g. target size)
- Error messages could associate with processes or input.
- Some harms are during processes
- AccName could be in "Controls" or "Structure and Meaning"

Working up an alternative (2)

I tried:

- Removing 'Controls', 'Navigation and Orientation'.
- Adjusting "Adaptability & Customisation" to "Customisation and Accomodations"
- Adjust "Multimedia" to "Multimedia Alternatives"
- Adjust "Design, Layout, & Hierarchy" to "Layout & Hierarchy"
- Adjust "Adaptability & Customization" to "Adaptation and accommodation"

Alternative

Updated categories:

- Prevent Harm & Deception
- Processes and data-entry
- Wording and Terminology
- Multimedia Alternatives
- Structure & Metadata
- Visual Layout
- Input Agnostic
- Color, Typography & Contrast
- Adaptation and accommodation

However:

- "Multiple ways" has no home
- "Input and agnostic" still had a lot of overlap.
- Structure and metadata still had a lot of overlap (mixing "how" with "what")
- Prevent harm overlaps with some interface areas.

Strict interface-area approach

Taking a purely "what part of the interface does this relate to" approach:

- Adaptive features
- Animation and movement
- Forms, inputs, and errors
- Imagery and Graphics
- Text and wording
- Interactive components
- Layout
- Media alternatives
- Organisation across views
- Policy

Careful that none of the categories could be mixed up with roles or activities (e.g. design, code.)

"Organisation across views" for things which don't happen on one view/page.

"Layout" for what is shown on a view, in relation to other things shown.

"Interactive components" is a big category.

Interaction type approach

- Adapting content
- Conveying content (to AT)
- Discernable content
- Input methods
- Media alternatives
- Preventing harm from content
- Understanding
  - layout
  - content
  - input
  - interactions
  - processes

Closer to the 'user-needs' approach.

Less overlap than the first alternatives, about the same

Comparison

Average

- Prevent Harm & Deception
- Processes and data-entry
- Wording and Terminology
- Multimedia Alternatives
- Structure & Metadata
- Visual Layout
- Input Agnostic
- Color, Typography & Contrast
- Adaptation and accommodation

Interface

- Adaptive features
- Animation and movement
- Forms, inputs, and errors
- Imagery and Graphics
- Text and wording
- Interactive components
- Layout
- Media alternatives
- Organisation across views
- Policy

Interaction style / approach

- Adapting content
- Conveying content (to AT)
- Discernable content
- Input methods
- Media alternatives
- Preventing harm from content
- Understanding
  - layout
  - content
  - input
  - interactions
  - processes