Design Exploration

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Computer Science Department
Stanford University

Winter 2021
February 1, 2021

*Slides marked Buxton are courtesy of Bill Buxton, from his talk "Why I Love the iPod, iPhone, Wii and Google", remix uk, 18-19 Sept. 2008, Brighton.

Outline

• Values in design
• Reviewing tasks
• Sketching to explore user experiences

Values in Design

• The artifacts we design embed values of the creators - whether we mean to or not...
• Example: Springboard Video (2014)

Hall of Fame or Shame?

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Good
- At first glance, is fun and unique
- Well polished, aesthetically pleasing

Bad
- What does a tape deck have to do with podcasts?
- Confused metaphor is difficult to understand
- Focus on 'retro' means the user has to wait 5 seconds to watch animation of tape loading before anything plays

Podcasts App
Apple Inc.
Values in Design

- The artifacts we design embed values of the creators – whether we mean to or not…
- Example: Springboard Video (2014)
- Chimanda Ngozi Adichie (author) says:
  "The single story creates stereotypes… not that they are untrue, but that they are incomplete. They make one story become the only story."
  "The danger of a single story", TEDGlobal 2009

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Design Process: Discovery

- Assets Needs
  - understand client’s expectations
  - determine scope of project
  - characteristics of customers & tasks
  - evaluate existing practices & products

Discovery
Design Exploration
Design Refinement
Production

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Task. The structured set of activities or high-level actions required to achieve a high level user goal.

**what** a user wants to do

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Task-based Design & Evaluation

- Real tasks customers have faced / will face
  - collect any necessary materials
- Do your tasks support the problem you are solving?
- Mixture of simple & complex tasks
  - simple task (common or introductory)
  - moderate task
  - complex task (infrequent or for power customers)

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Another Look at Tasks

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Token (Concept Video)
Token

OUR REPRESENTATIVE TASKS

- Personal Memories
- Shared Experiences
- Location Discovery

Questions on Tasks or Concept Videos

POOL YOUR KNOWLEDGE

In a moment, you’ll join a random breakout room.

Share your learnings and strategies that you’ve collected so far for filming and collaborating remotely on your concept videos.

When you return, we’ll thread your new findings in Slack!

Design Process: Exploration

- Discovery
- Design Exploration
- Design Refinement
- Production

Expand Design Space

- Brainstorming
- Sketching
- Storyboarding
- Prototyping

Iteration

At every stage!

- Prototype
  - Sketch
  - Paper
  - Video
  - Tool
  - Program

- Evaluate
  - Gut
  - OH
  - Expert Eval
  - Lo-fi Test
  - User Study

Sketching: A Quintessential Activity of Design

* Courtesy Bill Buxton
From Sketch to Prototype

- **Sketch**
  - **Question**
  - **Innovative**
  - **Submit**
  - **Describe**

- **Prototype**
  - **Answer**
  - **Didactic**
  - **Suggest**
  - **Define**

**Difference in intent rather than in form**

The Anatomy of “Sketching”

- **Quick / Timely**
- **Inexpensive / Disposable**
- **Plentiful**
  - Clear vocabulary. You know that it is a sketch (lines extend through endpoints, ...)
  - No higher resolution than required to communicate the intended purpose/concept
  - Resolution doesn’t suggest a degree of refinement of concept that exceeds actual state
- **Ambiguous**
If you want to get the most out of a sketch, you need to leave big enough holes.

There has to be enough room for the imagination.

— Courtesy Bill Buxton

Design as Choice: Generative & Reductive

Elaboration ("Flare")

Reduction ("Focus")

— Laseau (1980)

A designer that pitched three ideas would probably be fired. I’d say 5 is an entry point for an early formal review (distilled from 100’s). … If you are pushing one you will be found out, and also fired. … It is about open mindedness, humility, discovery, and learning. If you aren’t authentically dedicated to that approach you are just doing it wrong!

— Alistair Hamilton

VP Design

Symbol Technologies

People on a design team must be as happy to be wrong as right. If their ideas hold up under strong (but fair) criticism, then great, they can proceed with confidence. If their ideas are rejected with good rationale, then they have learned something.

… There are no dumb questions. There are no ideas too crazy to consider. Get it on the table, even if you are playing around. It may lead to something.

— Bill Buxton

Sketching User Experiences

pg. 147-149

Design rationale for decisions is key

— Courtesy Bill Buxton

Diverse teams make this work better

—Courtesy Bill Buxton
Administivia

- Grades on assignment 1
  - Team Average (88.7) ✔ (2%), ✔ (49%), ✔ (47%), ✔ (2%)
  - Presenter Average (93.8) ✔ (0%), ✔ (8%), ✔ (78%), ✔ (14%)
- Concept videos due Thu/Fri
  - We will watch the top ones in class on Monday & vote on awards
- Project Selection Criteria
  - Novelty
  - Significant UI component
    - e.g., last AI at Stanford but UI
  - Impact (e.g., frequency, density, & pain)
- Workshops coming up (dates & times TBD)
- Web site:
  - Figma/Sketch
  - Each team needs 1 person to fill out this form by Friday

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How might we encourage people to adapt their daily activities based on their emotions and environments?

Solution
Encouraging trying a new headspace or physical space every day

Assumptions
- Increase mental wellbeing
- Boost creativity
- Variability will remove the emotional burden from challenging activities

Prototype 2: SWITCHING IT UP

DESCRIPTION:
Participants moved to a new location to work for every new task/class of the day.

They were asked to go to places they’ve never worked before and later to reflect on how it affected their productivity, attitude, and emotions.

Results: Part 1

- What worked:
  - Felt refreshed
  - More engaged with work and people (good balance)

- What didn’t work:
  - Regular workspace was impossible to move
  - Meetings and calls still had to be taken in private

SELF GUIDED TOUR

- What do participants want to learn more about?
- Participants chose whether to get more info

VOICES EVERYWHERE
Make places tell personal stories
Assumption: people will seek more information about buildings and places they are unfamiliar with

Assumption: personal stories will make local sites more attractive to visit

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WESLEY
San Francisco based Recruiter at Strava
Avid Tennis Player

What worked: felt connected to the storyteller and shared stories of his own
What didn’t work: Videos without enough contextual info didn’t satisfy curiosity

Surprise: Wants on-demand historical context “right there” in short form text
New learning: Location-dependent preference for general historical context vs. learning via personal stories

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Assumption: People will seek more information about buildings and places they are unfamiliar with

Assumption: Personal stories will make local sites more attractive to visit

Team Break

• Reflect on last week’s assignment (5-10 min)
  - what did you like about your team work?
  - what do you wish could be improved?
  - share out

• This weeks assignment (25 min)
  - work on your tasks
  - TA will come around and give feedback

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What does the customer want to buy?
Experience vs. Interface Design

user experience = UI + situation + environment

Experience Design for a Phone App?

- Draw my phone
- Draw my app’s interface
- Draw the experience of using my app
- Which is the true object of design?

Minimal Detail

Include only what is required to render the intended purpose or concept

Scott McCloud’s Understanding Comics

People think focusing is about saying “yes.” But…
“Focusing is about saying no.” – Steve Jobs

Design Thinking is Iterative

Summary

- Our values are embedded in our artifacts → be aware of the values you’re bringing to your design
- Sketching allows exploration of many concepts in the very early stages of design
- As investment goes up, need to use more and more formal criteria for evaluation
Next Time

- Lecture
  - Lo-fi Prototyping

- Read
  - Involving Customers with Iterative Design (Ch 4) of The Design of Sites
  - Making a Paper Prototype (Ch 4) from Paper Prototyping by Carolyn Snyder

- Watch
  - The danger of a single story, Chimamanda Ngozi Adichie, TEDGlobal 2009 (20 min.)

- Project (due Thur/Fri in studio)
  - Concept video
  - Short (90 seconds ideal)
  - Tell a story more than show an interface

  **Storyboard**
  - Glad to look at rough cuts on Wed.