

October 26, 2016

- Steve
- Paper prototyping
 - Slides + video (30)
- Activity (45)
- Hot Topics
- Paper (30)

Design spaces are infinite

Many dimensions

- goals, desires, needs
- platforms & postures

Design Involves...

- Achieving (a subset of) goals within constraints
 - Goals
 - who is it for, why do they want it
 - Constraints
 - Materials, platforms, environments
 - Trade-offs
- Personas, scenarios, requirements, prototypes
 - Help focus & prioritize
 - Characterize & weight differences & tradeoffs in design ideas

Requirements
Gathering

Design Requirements

- Clarify the problem & vision (user + business goals)
- Iterative, derived from data gathering activities
- Personas, scenarios
 - Should reflect most important goals, challenges, contextual information, etc.
 - Look to data for additional important insights
- Business, technical and legal needs/constraints

Design Requirements

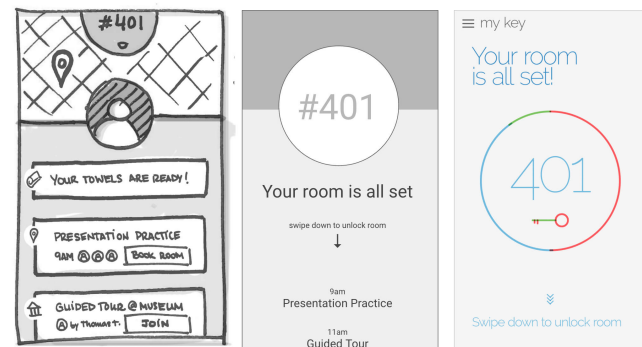
- Types of design requirements
 - Data: objects & info represented in the system
 - Functional: operations / actions performed on the system's objects
 - Contextual: additional considerations regarding
 - the settings/scenarios of use
 - relationships/dependencies between objects
 - skills/capabilities of users, etc.

What is a Prototype?

- Manifestation of the design
 - Allows stakeholders to interact w/ & explore suitability
- Screen sketches
- Wireframes
- Storyboards
- Interactive paper prototypes
- Physical (e.g., small box for phone)
- PowerPoint slides
- Video prototype (describes problem & scenario of use)
- Software

What is a Prototype?

- **Fidelity**
 - Low (not functional, sketches)
 - Medium (semi-functional software)
 - High (functional software)
- Level of “doneness”/closeness to final product
- **Advantages + Disadvantages?**



Type	Advantages	Disadvantages
Low-fidelity prototype	<ul style="list-style-type: none"> Lower development cost Evaluates multiple design concepts Useful communication device Addresses screen layout issues Useful for identifying market requirements Proof of concept 	<ul style="list-style-type: none"> Limited error checking Poor detailed specification to code to Facilitator-driven Limited utility after requirements established Limited usefulness for usability tests Navigational and flow limitations
High-fidelity prototype	<ul style="list-style-type: none"> Complete functionality Fully interactive User-driven Clearly defines navigational scheme Use for exploration and test Look and feel of final product Serves as a living specification Marketing and sales tool 	<ul style="list-style-type: none"> More resource-intensive to develop Time-consuming to create Inefficient for proof-of-concept designs Not effective for requirements gathering

Table 11.3 Advantages and disadvantages of low- and high-fidelity prototypes

Why prototype?

- Evaluation & feedback from users
- Identify problems early on
- Team members
 - Support more detailed communication
- Designer/developer
 - Test out ideas for yourself & reflect

Paper Prototyping

- Low-fidelity
 - Fidelity of your prototype = match fidelity of your ideas
- Further requirements gathering
 - Easy to edit & annotate
- Simulation of software **interactivity**
 - Sketches of screen elements
 - Focus is on high-level concepts & navigation, **not details**
- During team meetings, user evaluations
- Set time limits
 - Enough time to build something that will yield useful feedback

Paper Prototyping

- Your tools: school & art supplies
 - Heavy paper (will be manipulating a lot)
 - Index cards
 - Post-it notes
 - Adhesives
 - Pencils, pens, markers
 - Acetate sheets (overheads)

Paper Prototyping Video

- <https://www.youtube.com/watch?v=9wQkLthhHKA>

Paper Prototyping Activity

- Use Scenario from last activity
- Develop requirements: data, functional & contextual
- Develop a paper prototype
 - Address requirements, with a particular focus on persona goals
 - Create a briefing
 - Create a set of tasks for participants (what do you want to learn about?)
- Roles
 - Facilitator
 - Computer
 - Observer (notes)
 - Emissary
- Conduct a user test session (twice)

Debrief

- Strengths & weaknesses of the kit?
- What did you learn about from your participant?
- Was interaction & reaction as you expected?
- How was the experience of thinking aloud (as a participant, as a facilitator)?
 - Advantages + disadvantages
- Was the moderator impartial (unbiased)?
 - Voice, body language, words
- Did the facilitator/moderator offer help prematurely?
- Did participants discuss their own reactions or thoughts about hypothetical users?

For next week

- No lab reflection due this Friday
- I2 due Nov 2, @ 6pm
- Read
 - Interfaces (PSR CH6).
 - Visual Design (CRC Ch 17, 19--especially pp507-553)
 - HCI Theory: Experience