dt +UX DESIGN THINKING FOR USER EXPERIENCE DESIGN + PROTOTYPING + EVALUATION

Early Stage (lo-fi & med-fi) Prototyping

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Interface Hall of Fame or Shame?

Dyson AirBlade hand dryer
example courtesy of Maya I.

Interface Hall of Fame or Shame?

Good
- shape indicates function
- so simple that instructions fit in 1 image
- fun!

Bad
- dripping water?
- too much noise
- still takes too long

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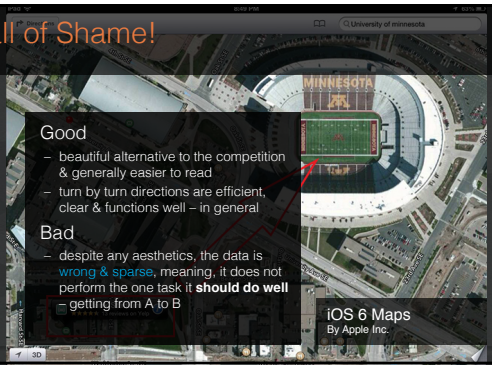
Hall of Shame!

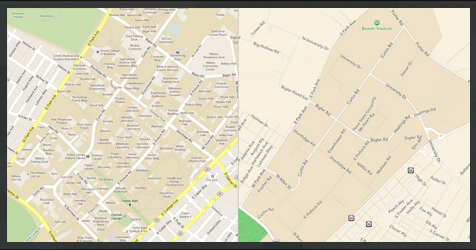


Good
- beautiful alternative to the competition & generally easier to read
- turn by turn directions are efficient, clear & functions well – in general

Bad
- despite any aesthetics, the data is wrong & sparse, meaning, it does not perform the one task it **should do well** – getting from A to B

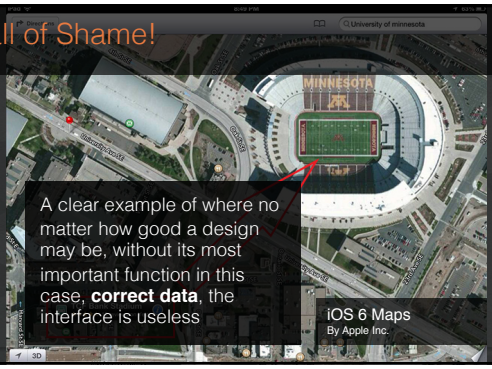
iOS 6 Maps
By Apple Inc.

Hall of Shame!



Google Maps Data vs iOS6 Maps Data

Hall of Shame!

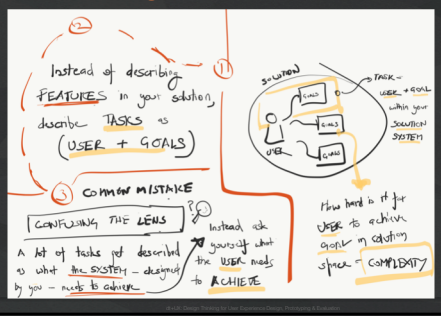


Potentially Hall of Fame

Outline

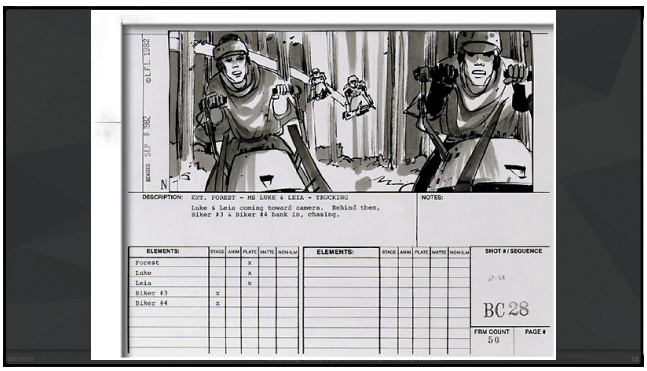
- Sketching vs. Storyboarding
- Low-fi prototyping
- Conducting a low-fi test
- Medium-fi prototyping

Tasks According To Trijeet

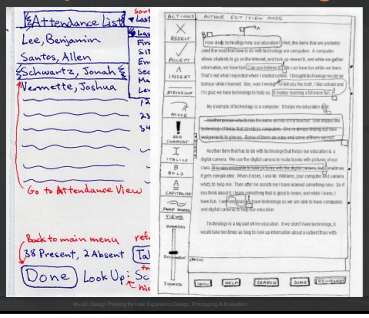


Sketches & Storyboards

- Where do storyboards come from?
  - –film & animation
- Give you a "script" of important events
  - –leave out the details
  - –concentrate on the important interactions



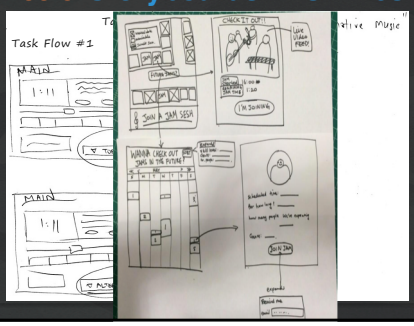
Sketches & Storyboards in UX Design



Sketches & Storyboards in UX Design

Starts to tell a story, but still describes the design

Sketches & **Storyboards in UX Design**



What is a Prototype?

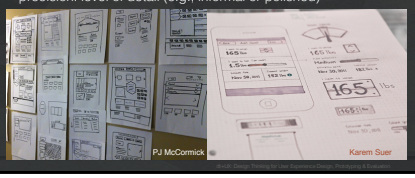
"A prototype is an early sample or model built to test a concept or process or to act as a thing to be replicated or learned from."
– Wikipedia

a working representation of a final artifact

Types of Prototypes

Prototypes are concrete representations of a design

Prototype dimensions
- representation: form of the prototype
  - off-line (paper) or on-line (software)
- precision: level of detail (e.g., informal or polished)



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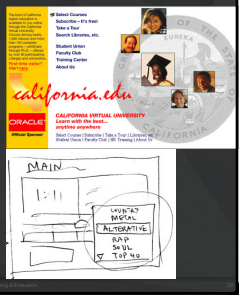
- precision: level of detail (e.g., informal or polished)
- interactivity: watch-only vs. fully interactive
  - fixed prototype (video clips)
  - fixed-path prototype (each step triggered by specified actions)
    - at extreme could be 1 path or possibly more open (e.g., Denim)
  - open prototype (real, but limited error handling or performance)
- evolution: expected life cycle of prototype
  - e.g., throw away or iterative

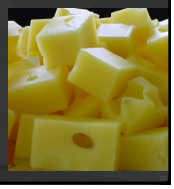
Fidelity in Prototyping

- Fidelity refers to the level of detail
- High fidelity?
  - –prototypes look like the final product
- Low fidelity?
  - –artists renditions with many details missing



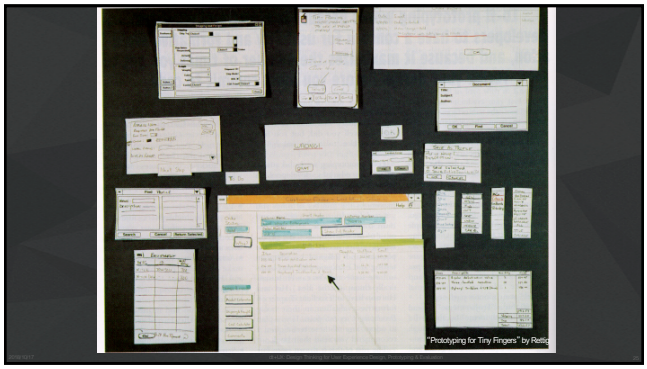
Hi-fi Prototypes Warp

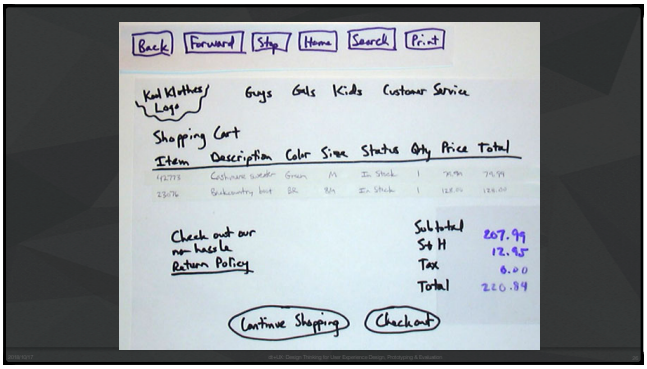
- Perceptions of the tester/reviewer
  - –representation communicates "finished"
    - comments focus on color, fonts, & alignment
- Time
  - –encourage precision
    - specifying details takes more time
- Creativity
  - –lose track of the big picture



Why Use Low-fi Prototypes?

- Traditional methods take too long
  - –sketches → prototype → evaluate → iterate
- Can instead simulate the prototype
  - –sketches → evaluate → iterate
  - –sketches act as prototypes
    - designer "plays computer"; others observe & record
- Kindergarten building skills
  - –allows non-programmers to participate


"Prototyping for Tiny Fingers" by Rettig


Back
Forward
Stop
Home
Search
Print
Kool Klothes Logo
Guys
Gals
Kids
Customer Service
Shopping Cart
Item
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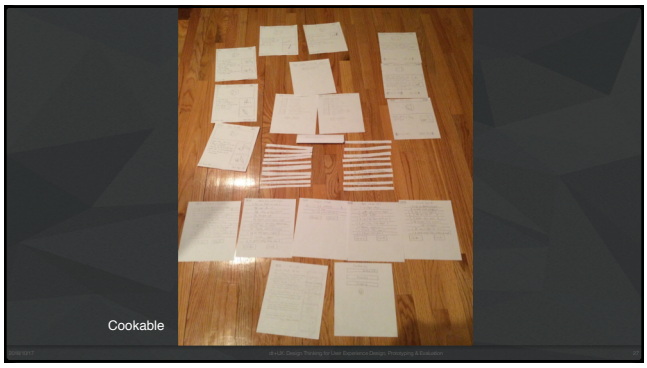
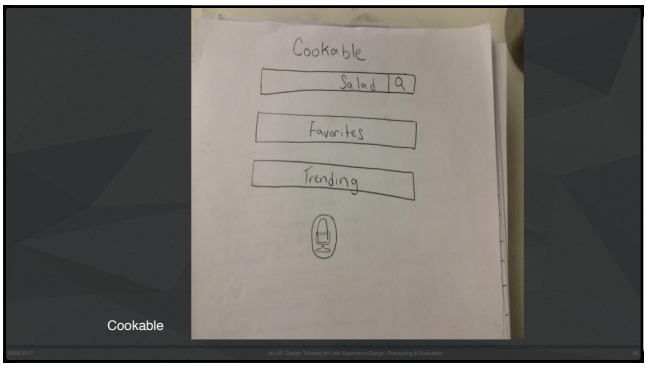
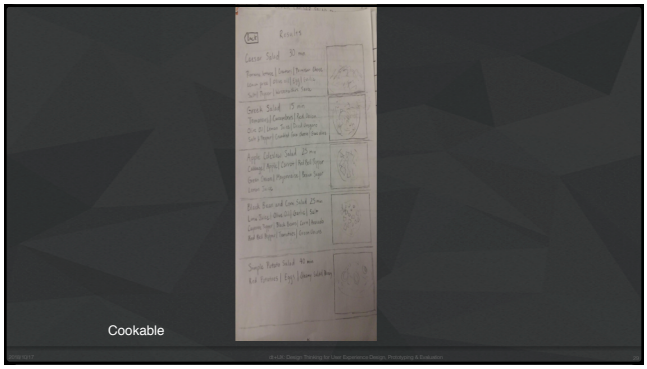
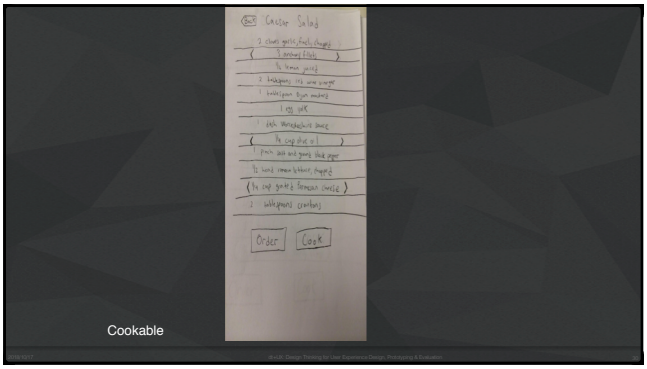
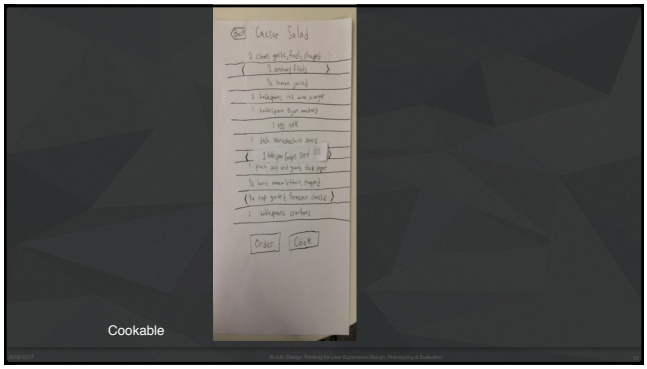
Total
Check out our no-hassle Return Policy
Subtotal
Sh H
Tax
Total
Continue Shopping
Checkout

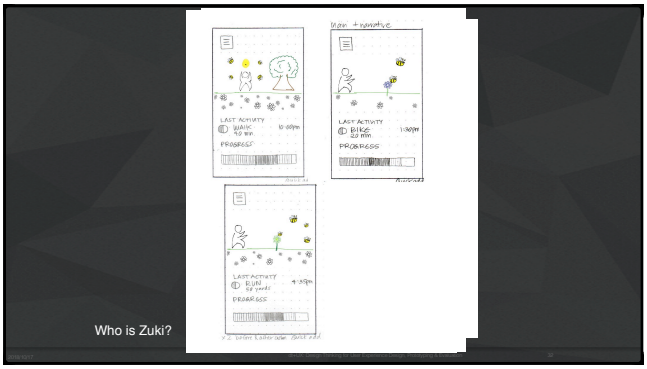

Cookable


Cookable
Salad
Favorites
Trending
Cookable


Cookable


Caesar Salad
Order
Cook
Cookable





Administrivia

- Assignment #5 – Low-fi Prototype & Pilot Usability Test
  - 15-20 rough sketches of different design realizations
    - everyone on team contributes
    - use ***different modalities*** (e.g., visual, speech, watch) or ***different visual UIs input techniques*** (gestures, taps, etc.)
    - will do some of this in studio this week
  - pick top 2 realizations & storyboard more
  - pick best realization & add details to storyboard
  - build low-fi prototype of the best & test it w/ at least 3 target participants (non Stanford)
- Web sites directories will be created for each team by Thursday
  - 10 teams have ***not*** yet filled in team name survey (we need it now!)
  - Start to get sites up there! Should have all your work – though not graded until end
  - TAs will send you your directory path/name on web.stanford.edu
- Special Guest next Wed
  - Prof. Ge Wang (Music) on Artful Design (make sure to do the reading)

Grading on First Two Assignments

Needfinding Assignment #1

A1 Group Presentation: ✓−: 7% ✓: 72% ✓+: 21%
A1 Individual Presentation: ✓−: 0% ✓: 51% ✓+: 49%

POV, HMW, EP Assignment #2

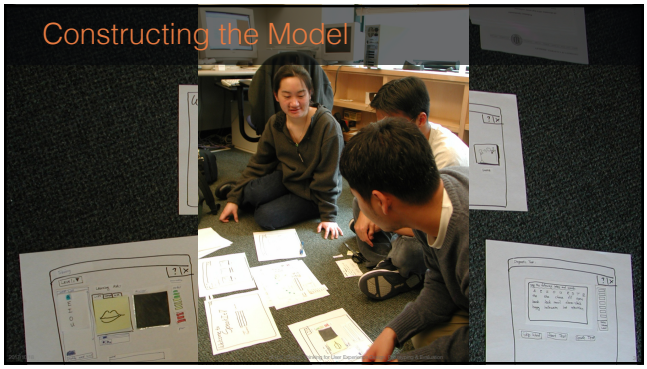
A2 Group Report: ✓-: 2% ✓: 40% ✓+: 58%
A2 Group Presentation: ✓-: 0% ✓: 35% ✓+: 65%
A2 Individual Presentation: ✓-: 2% ✓: 30% ✓+: 68%

TEAM MEETINGS

Constructing the Model

- Set a deadline
  - –don't think too long - build it!
- Draw a window frame on large paper
- Put different screen regions on cards
  - –anything that moves, changes, appears/disappears
- Ready response for any user action
  - –e.g., have those pull-down menus already made
- Use photocopier/printer to make many versions

Constructing the Model



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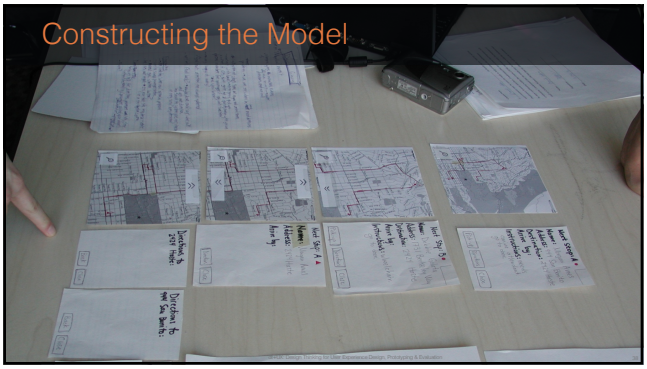
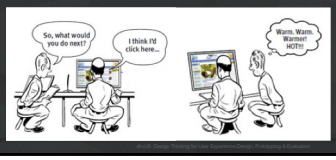


Preparing for a Test

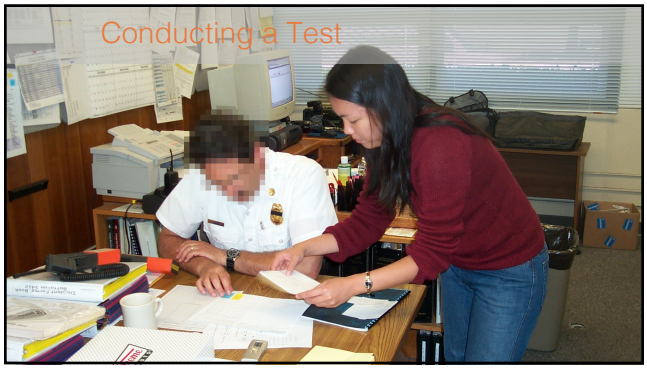
- Select your "customers"
  - –understand background of intended users
  - –use a questionnaire to get the people you need
  - –don't use friends or family
- Prepare scenarios that are
  - –typical of the product during actual use
  - –make prototype support these (small, yet broad)
- Practice to avoid "bugs"

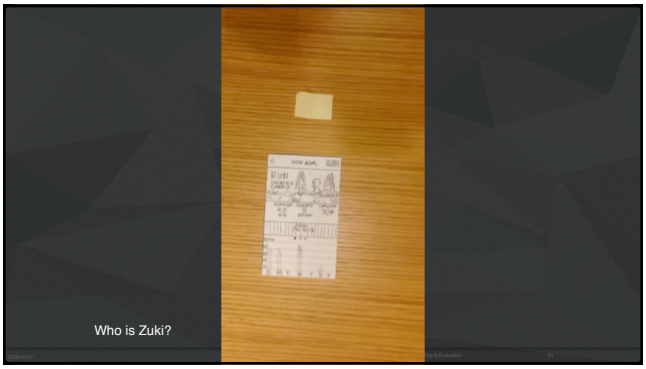
Conducting a Test

- Four roles
  - –greeter – puts users at ease & gets data
  - –facilitator – only team member who speaks
    - gives instructions & encourages thoughts, opinions
  - –computer – knows application logic & controls it
    - always simulates the response, w/o explanation
  - –observers – take notes & recommendations



Conducting a Test





Evaluating Results

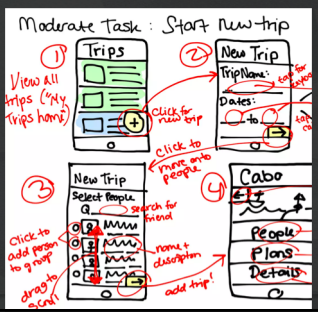
- High level questions about your design
  - –does it address the problem you want to solve?
  - –is this the right realization of your solution?
- Sort & prioritize observations
  - –what was important?
  - –lots of problems in the same area?
- Make changes & iterate
  - –even iterate between tests

Quiz

http://bit.ly/cs147-18au-quiz-2

Fidelity in Prototyping:

Instagator



Fidelity in Prototyping

Task 1: Take a Destination Poll

Summary

- Prototypes are a concrete representation of a design or final product
- Low-fi testing allows us to quickly iterate
  - –get feedback from users & change right away

Further Reading

Prototyping

- Books
  - Paper Prototyping: The Fast and Easy Way to Design and Refine User Interfaces, by Carolyn Snyder, Morgan Kaufmann, 2003
- Articles
  - "Prototyping for Tiny Fingers" by Marc Rettig, in Communications of the ACM, 1994
  - "Using Paper Prototypes to Manage Risk" by Carolyn Snyder, http://world.std.com/~uieweb/paper.htm
  - "The Perils of Prototyping" by Alan Cooper, http://www.chi-sa.org.za/Documents/articles/perils.htm

Next Time

- Lecture
  - Watch, Critique, & Vote on Concept Videos
  - Mid-term studio evaluation
- No Reading
- Project
  - 15-20 sketches of 3-5 design realizations in studio…
  - Pick the top two & storyboard those
  - Pick the top 1 & build/test low-fi prototypes using 3 key tasks for next week's studio presentation
    - Recruit representative participants now!