HCI+D: USER INTERFACE DESIGN + PROTOTYPING + EVALUATION

Concept Videos &
Video Prototypes

Prof. James A. Landay
Computer Science Department
Stanford University

Autumn 2014

October 9, 2014

Hall of Fame or Shame?

Paper iPad App
By 53

Hall of Fame or Shame?

fiftythree.com

Kyoto
19 pages

Gestures like Pinching out to move forward, inwards to go back – as if you were opening or closing a book

Hall of Fame or Shame?

Paper iPad App
By 53

Good
– pens feel natural & the app is extremely good for its only real purpose: idea generation / notation
– once 3 basic gestures are learned, they become a natural part of rapid ideation
– look & feel is important here as the tools are "pleasurable" & work as expected

Bad
– gestures are not easily discoverable and require a short initial tutorial

Paper iPad App
By 53

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!

A clear example of where no matter how good a design may be, without its most important function in this case, **correct data**, the interface is useless

iOS 6 Maps
By Apple Inc.

Potentially Hall of Fame

Apple is working to crowd source data

The UI for problem reporting is well designed

With so many users have potential to fix data rapidly

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Outline

- Review Design Exploration
- Review Teams vs. Groups

- Types of Prototypes
- Video Brainstorming
- Video Prototyping
- Concept Videos

Review Design Exploration

- Selecting tasks ?
  - real tasks with reasonable functionality coverage
  - complete, specific tasks of what customer wants to do
- 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
- Informal prototyping tools bridge the gap between paper & high-fi tools

Teams vs. Groups

- Teams & good performance are inseparable
  - a team is more than the sum of its parts

Groups	Teams
strong leader	shared leadership
individual accountability	individual & mutual accountability
organizational purpose	specific team purpose
individual work products	collective work products
efficient meetings	open-ended meetings
measures performance by influence on others	measures performance from work products
delegates work	does real work together

Keys to Team Success

- Common commitment
  - requires a purpose in which team members believe
    - "prove that all children can learn", "revolutionizing how we use energy in the home", …
- Specific performance goals
  - comes directly from the common purpose
    - "increasing the scores of graduates form 40% to 95%"
  - helps maintain focus – start w/ something achievable
- A right mix of skills
  - technical/functional expertise (programming/design/writing)
  - problem-solving & decision-making skills
  - interpersonal skills
- Agreement
  - who will do particular jobs, when to meet & work, schedules

Team Action Items

- Keep meeting & get used to each other
- Figure out strengths of team members
- Assign each person a role
  - responsible for seeing work is organized & done
  - not responsible for doing it themselves
- Names/roles listed on CI/TA assignment

Roles

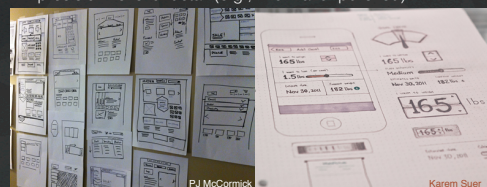|	
team manager (coordinate - big picture)	design (visual/interaction)
	user testing
documentation (writing)	development

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)

PJ McCormick   Karem Suer

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)
– 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

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Video Brainstorming

• Participants act ideas out in front of a video camera
• Goal is to create as many new ideas as possible
  – each should take 2-5 minutes to generate & capture
  – run standard brainstorming session first for ideas
• Advantages
  – video easier to understand later than notes
  – participants actively experience interaction & preserve record of the idea
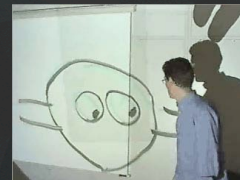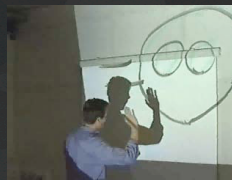
Video brainstorming of an animated character in *Prototyping Tools & Techniques* by Beaudouin-Lafon & Mackay. Character follows user with its eyes.

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Video Prototyping

• Illustrate how users will interact w/ system
• Unlike brainstorming, video prototyping contracts the design space
• Quick to build
• Inexpensive
• Forces designers to consider details of how users will react to the design
• May better illustrate context of use

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Video Prototype Characteristics

Paper Protoypes, Exisiting Software or Projected Images as a background

Optional Narration, Conversation preferred
narrator explains events & others move images/ illustrate interaction while actors perform movements – viewer expected to understand w/o voice-over

Usually fixed prototypes, but can also use in open prototypes
e.g., live video as Wizard of Oz tool & 2nd camera to capture

With good storyboards, a good short film can be shot in 1 hour

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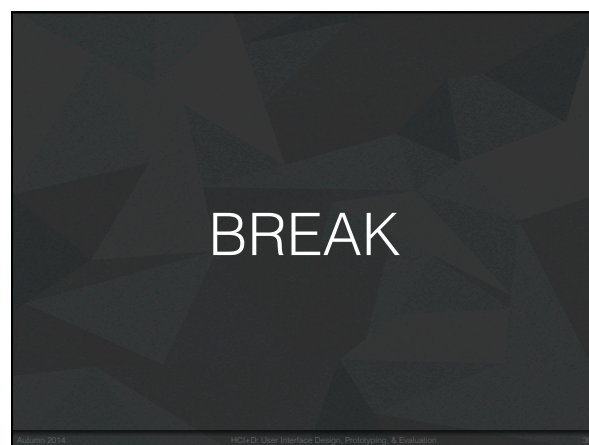
Wizard of Oz Video Prototype

Image from Beaudouin-Lafon & Mackay
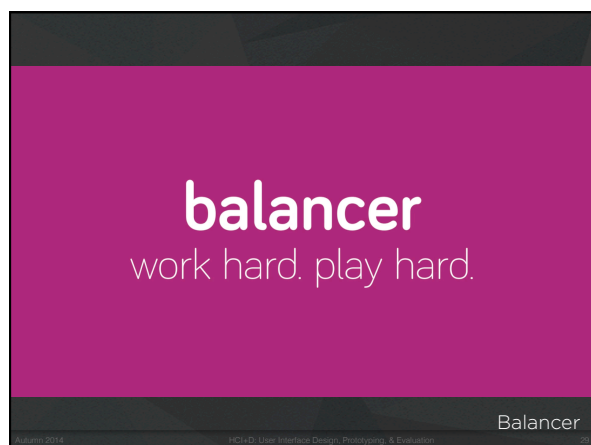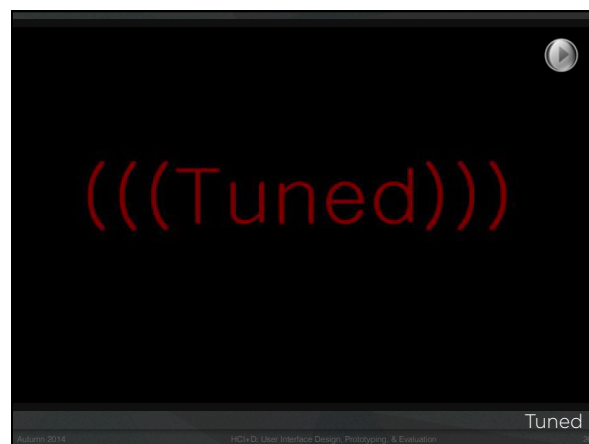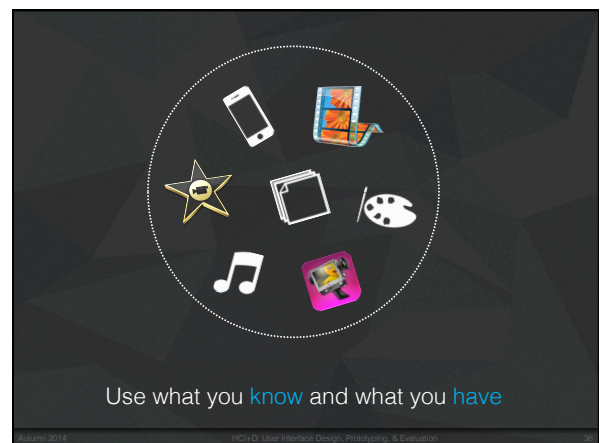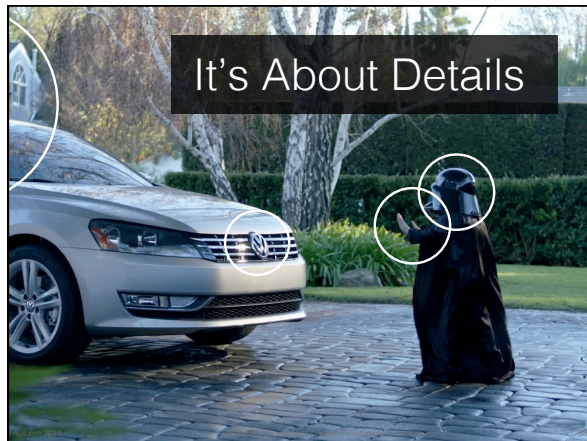
Video Prototype Examples

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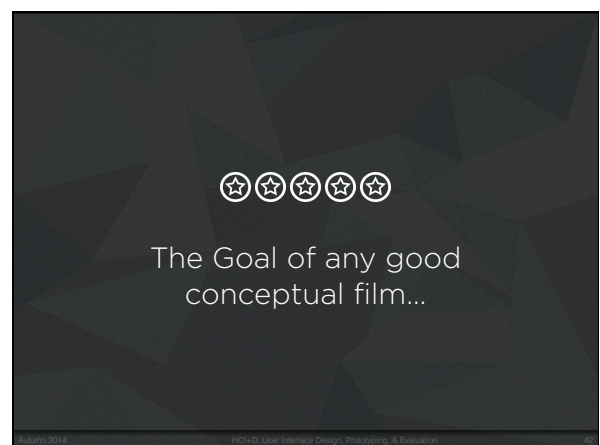
greenBean

Tuned

Carbon Shopper

upLift

Balancer

BREAK

Concept Video Examples

Cookable
Cooking Made Easy

Cookable

micro**health**
A little goes a long way

MicroHealth

PERSPECTIVE CONCEPT VIDEO

Musistant

The Goal of any good conceptual film...

Someone should be able to understand your project simply by watching your film

6 ! Subway service suspended.
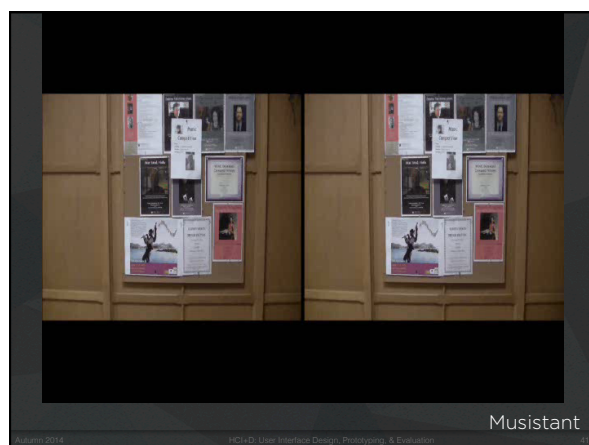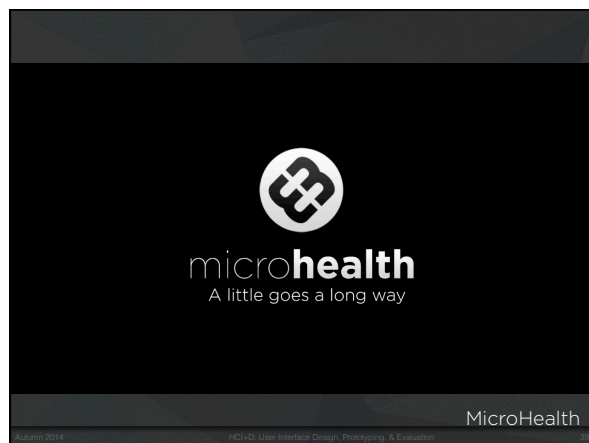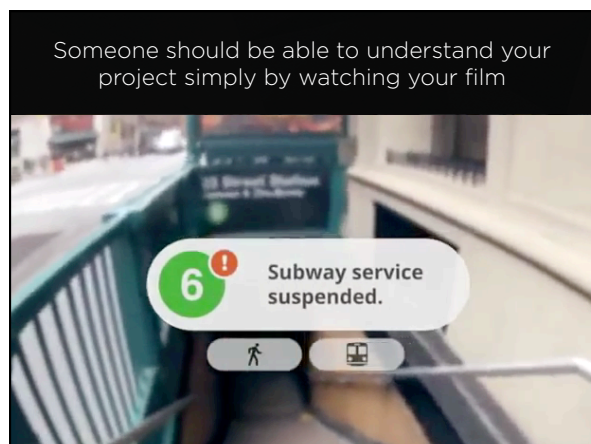
Making a Concept Video

Define
What is the message of the film?
Can you describe it in a few lines?

Make a basic plot
Discuss plot ideas until you get a few that really make sense, decide characters

Storyboard
Turn these into multiple storyboards of scenes to plan how you will film it
* note: not UI storyboards!

Storyboarding

Use sticky notes so scenes can be moved

Include lines to be spoken if necessary

Use appropriate angles

If you choose to use music
Now might be a good time to pick some songs. Music can be very powerful if chosen well. (see Vimeo for music you can use free)

Shoot your Film
Get as many shots as you can! you never know what might be useful later.

Edit your Film
Use your storyboard! This part should be simple if you have storyboarded correctly.

Lighting ☀

Basic 3 Point Lighting Setup

Front View

-Back Light
Low Intensity
(Must use / Diffusion)

Top View
-Back Light
Key Light
Fill Light
Camera

-Key Light
Brightest
(45º angle / to camera)

Fill Light-
Med.Intensity
(50-75% of / Key Light)

Camera
(Position about eye level)
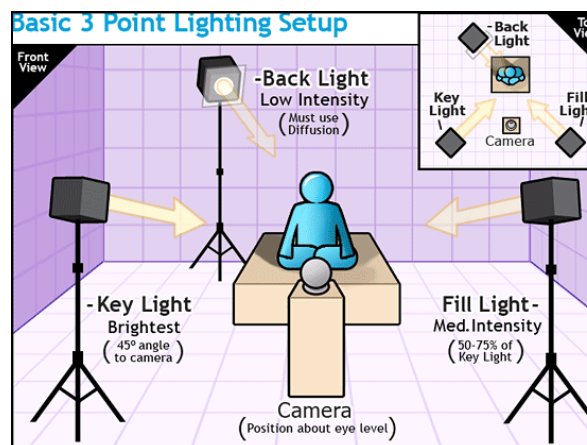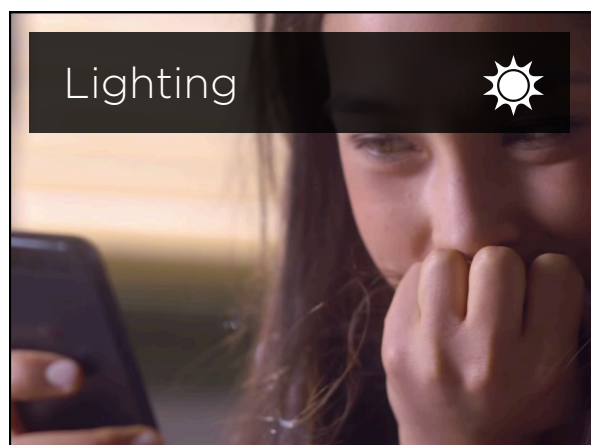
High Fidelity Video Examples

AWI
Vink, Cauchard, & Landay

Use Close-Up shots

Capture emotion

Avoid conversation
(This is the hardest to get
right and ends up distracting)

Use the right person
for the role-ask friends

People

Plan your story –
Storyboard it.

Is the story believable?

Film multiple angles

Film longer than the
shot needs (you can
always cut down)

Context

Wow Effect
Show your solution at it's
best, save the best for last

Subtlety
Show how the solution
makes the user feel – subtly

Don't 'Sell' it
Don't tell people to use your
solution, show them why

The Solution

High Fidelity Video Prototypes

PERSPECTIVE
A COLLECTIVE UNDERSTANDING

Final Perspective Video

High Fidelity Video Prototypes

Cookable
Cooking Made Easy

Final Cookable Video

High Fidelity Concept Videos

B⊕NES

Pedro Andrade, CIID

More Example Videos

- Video Prototypes
  - cluster
  - dont_forget
  - dont_forget2
  - dont_forget_russian
  - Cell Phone Music Player
  - CarbonShopper
  - StyleEye

- Concept Videos
  - LingoImmersion
  - MicroHealth
  - Perspective
  - Musistant
  - Project Harmony
  - Wanderlust
  - MicroHealth

- Final Hi-Fi Videos
  - Perspective
  - Rii
  - Hero
  - Paintora

Summary

- Video prototypes allow us to quickly communicate how a user will use a design

- Concept videos set up more of the story of use

- Both techniques are useful
  - your projects are at the concept video stage

Concept Video Assignment

- Due next week at start of studio
- 1) UI Design
  - UI Storyboards of 3 different UI ideas
    - can be further details on ones from CA/TA
  - UI Storyboards of 3 tasks for the best UI idea
    - show scenarios for 3 tasks – i.e., storyboard how to carry out each task using your best UI
- 2) Concept Video
  - Video Storyboards
    - video storyboard 3 different *scenes* (corresponding to your 3 tasks above) – shots, characters, etc.
  - Video
    - shoot, edit, & upload

Next Week

- Tuesday: Human Abilities
  - Pages 66-85 of "Cognitive Aspects in Interaction Design", from *Interaction Design* by Rogers, Sharp, & Preece

- Thursday: Early Stage Prototyping
  - Read Chapter 4 of *The Design of Sites* & "Making a Paper Prototype" (Ch. 4) from *Paper Prototyping* by Carolyn Snyder

- Friday Studio
  - Your Concept Videos will be shown & critiqued