User Interface Software Projects

Assoc. Professor Donald J. Patterson
INF 134 Winter 2013

Tuesday, January 29, 13

Interactive Paper Interfaces

- Why sketching?
  - Quick
  - Timely
  - Inexpensive
  - Disposable
  - Plentiful
  - Clear Vocabulary
  - Distinct Gesture
  - Minimal Detail
  - Appropriate degree of refinement
  - Suggest and explore, not confirm
  - Ambiguity

Sketches are intentionally ambiguous. They can be interpreted in different ways. Unexpected relationships emerge from viewing them, even for the sketcher.
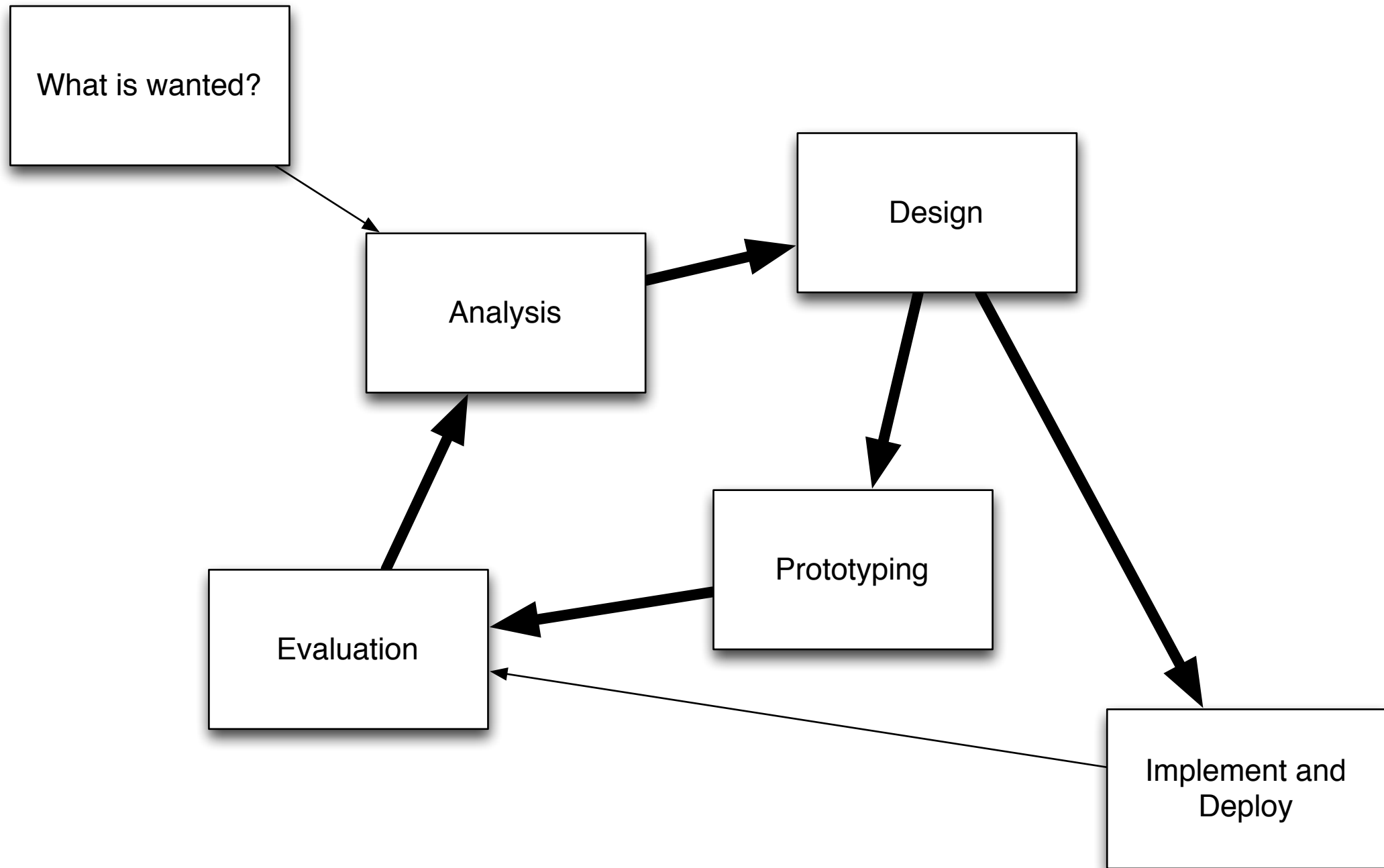
Interactive Paper Interfaces

- Why sketching?
  - Quick
  - Timely
  - Inexpensive
  - Disposable
  - Plentiful
  - Clear Vocabulary
  - Distinct Gesture
  - Minimal Detail
  - Appropriate degree of refinement
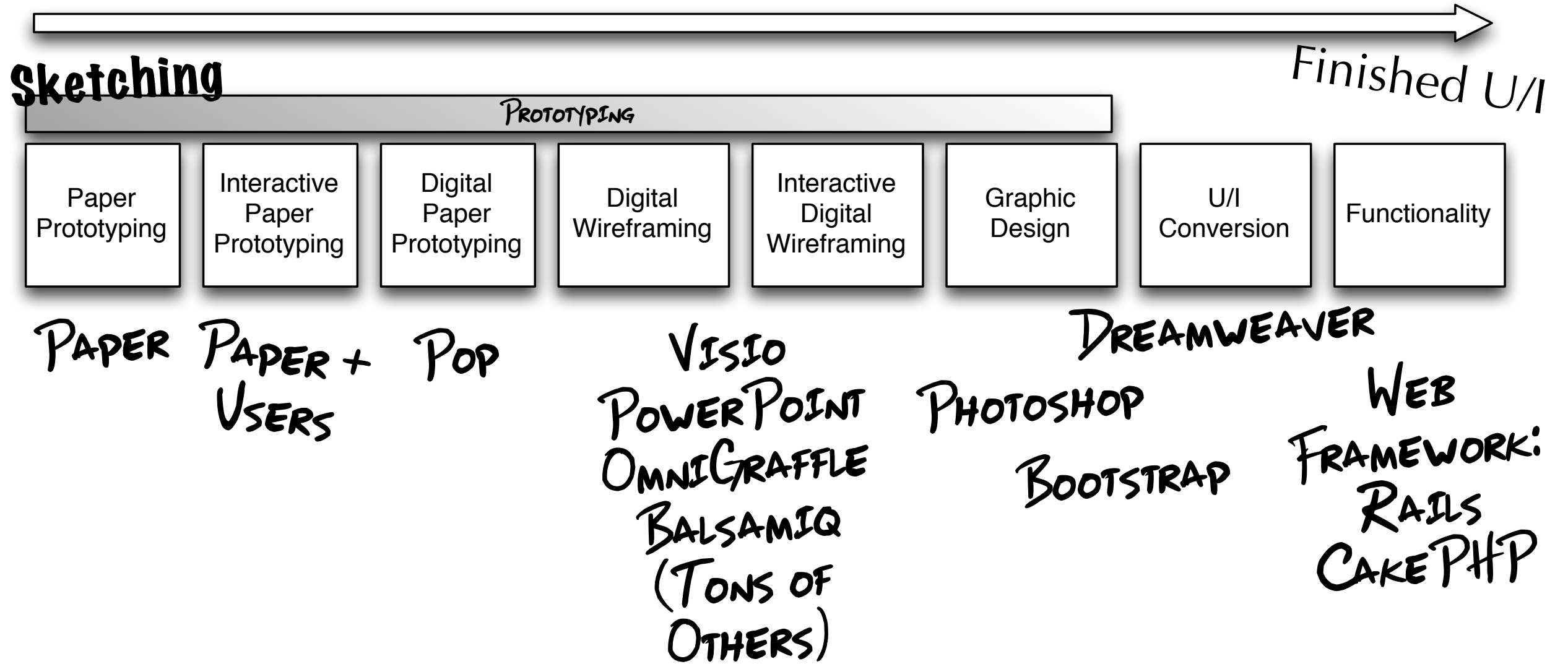 - Suggest and explore, not confirm
  - Ambiguity

Sketches are intentionally ambiguous. They can be interpreted in different ways. Unexpected relationships emerge from viewing them, even for the sketcher.

Design Process

What is wanted? → Analysis → Design

Design → Prototyping

Design → Implement and Deploy

Prototyping → Evaluation

Evaluation → Analysis

Implement and Deploy → Evaluation

Prototyping

Sketching

Finished U/I

PROTOTYPING

| Paper Prototyping | Interactive Paper Prototyping | Digital Paper Prototyping | Digital Wireframing | Interactive Digital Wireframing | Graphic Design | U/I Conversion | Functionality |

Paper

Paper + Users

Pop

Visio
PowerPoint
OmniGraffle
Balsamiq
(Tons of
Others)

Dreamweaver

Photoshop

Bootstrap

Web
Framework:
Rails
CakePHP

Interactive Paper Interfaces

- Sketching Exercise
  - YouTube
  - LA Times
  - Amazon
- Why?
  - to study the layouts
  - to think about sketching and prototyping by doing
  - to see other people's sketching styles

- Turning it into a video example
  - Post it note example video
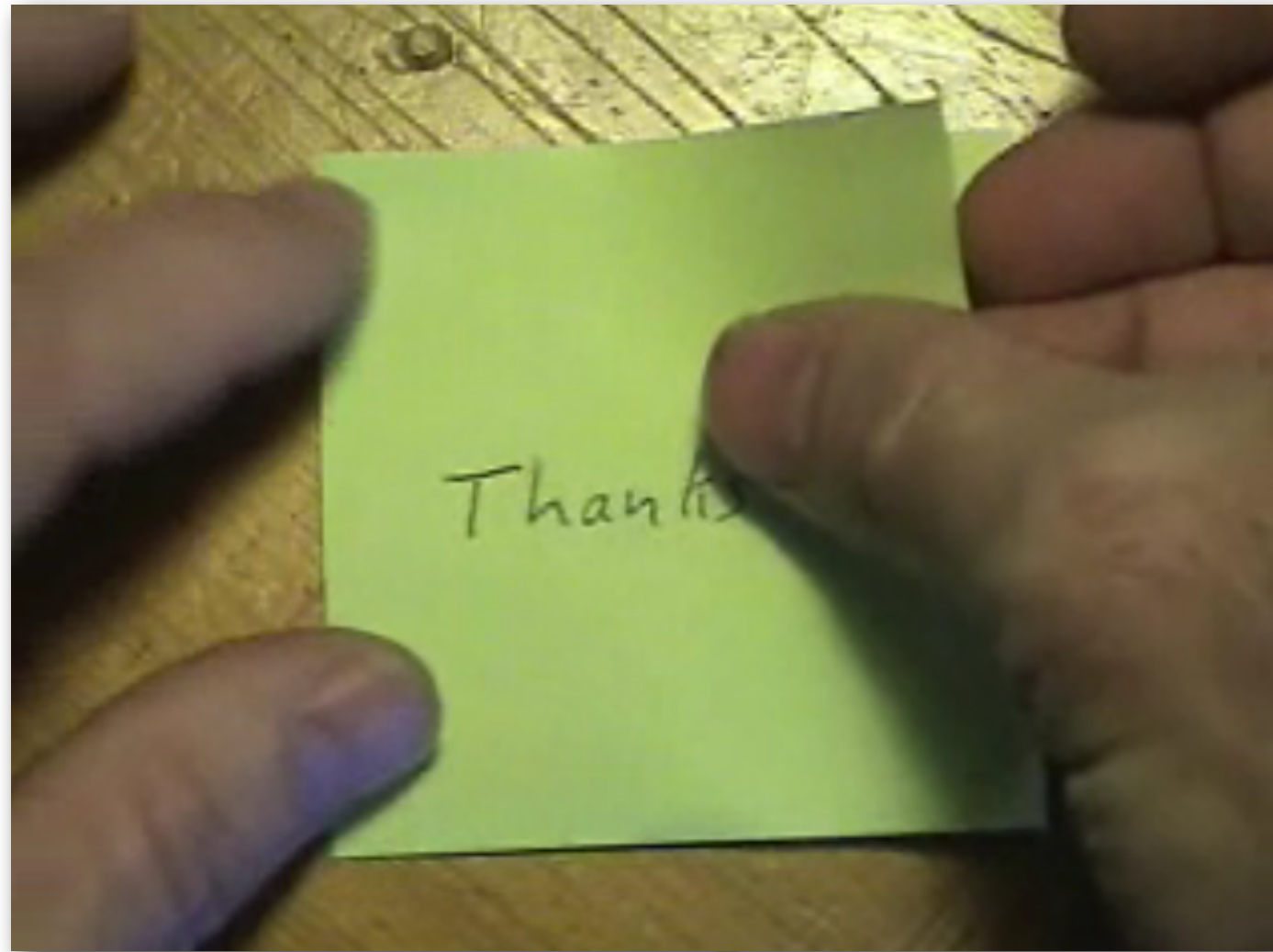
Interactive Paper Interfaces

- Try it

- Create an interface with two buttons
  - "Touch"
  - "Do not touch"

- Create a landing page for each
  - With a back button for "Do not touch"

-

Rapid Prototyping

- Fail fast

Interactive Paper Interfaces

- Protocol
  - One person sketches and operates the sketch
  - One person is the user
  - Both are important
  - Both talk the whole time the interface is tested.
    - Sketcher explains the task
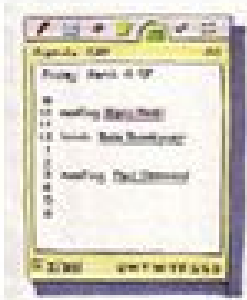   - User verbalizes what they are thinking, looking for, expecting
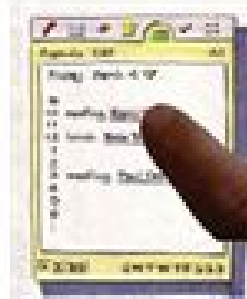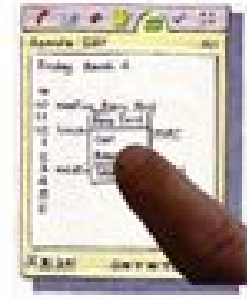
Interactive Paper Interfaces

- Protocol
    - Operating the sketch means:
        - Presenting views of the interface to the user
        - Replacing views as the user interacts.
    - Being a user means
        - Using your hands to point and click
        - Verbalizing what's going on in your head

	Facilitator	User
	(Start: Sketch 1.a in front of user.) The sketch in front of you shows the screen of your PDA. I want you to send a message to your 10:00 am appointment. For this exercise, to do anything, just touch what you think is appropriate on the screen, and tell me what you are doing or thinking as you go along.	
		Okay. I assume that you want me to send a message to Mary Ford, since she is my 10:00 am appointment. So I will touch her name.
	(Facilitator replaces sketch 1.a with 2.b)	Now I see a menu that lets me either call her or message her.
		So, what I will now do is touch "message" on the menu.
	(Facilitator replaces sketch 2.b with 4.a)	Okay. I now see a screen that lets me send a message to Mary Ford. What now?

- What are possible outcomes?
  - Insight into the task
  - New ideas of how to implement it differently
  - Expose design errors (obvious in hindsight)
  - Insight into the user's expectations
  - A video capture can be sent to remote collaborators
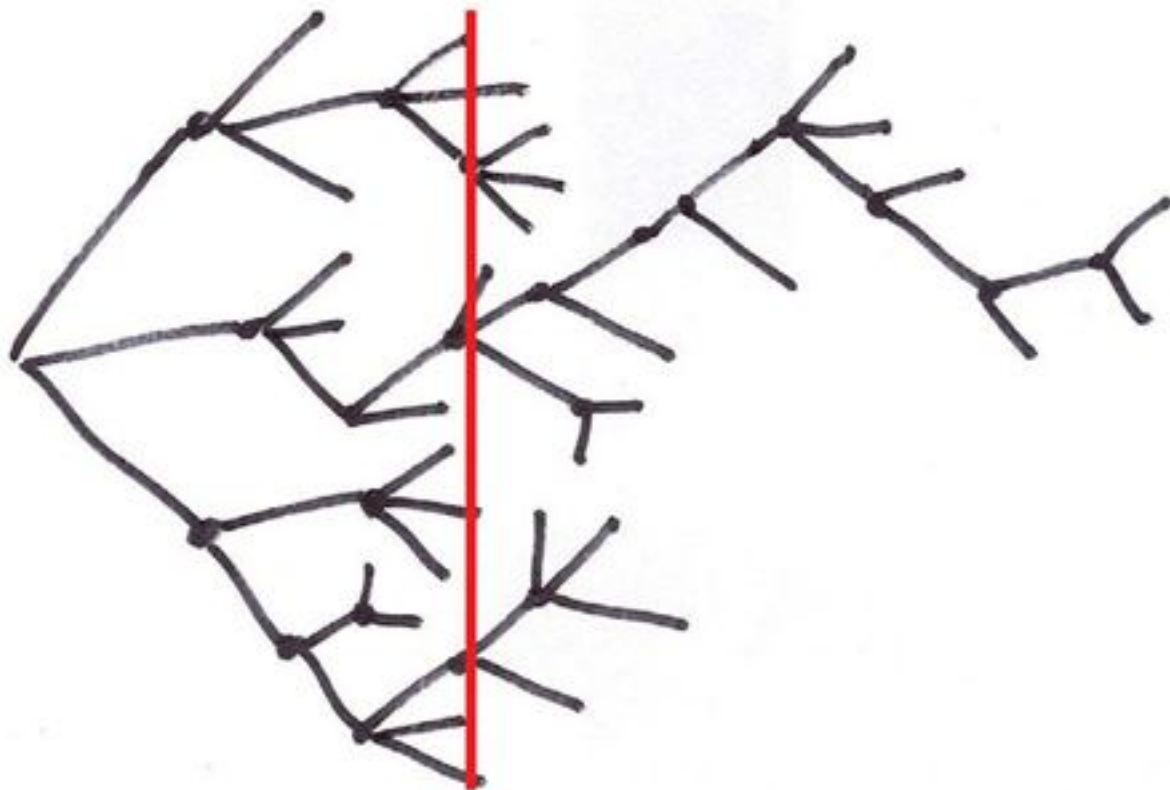 - An analysis of the sketched interface

Interactive Paper Interfaces
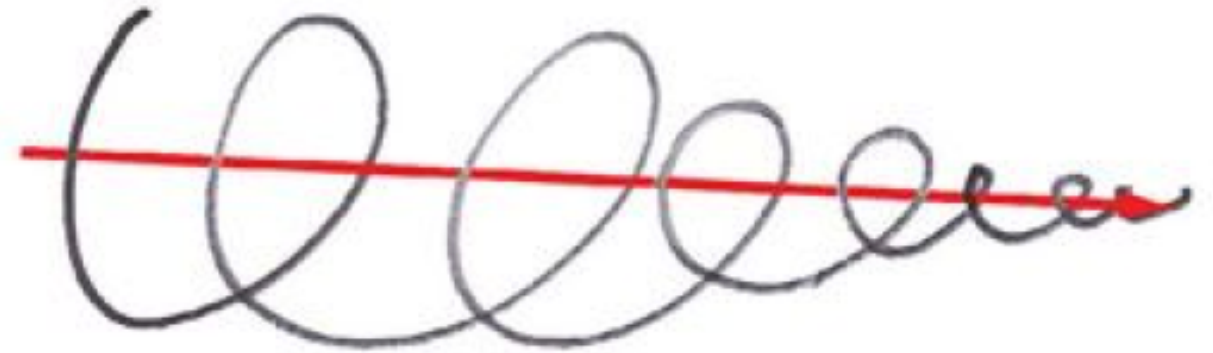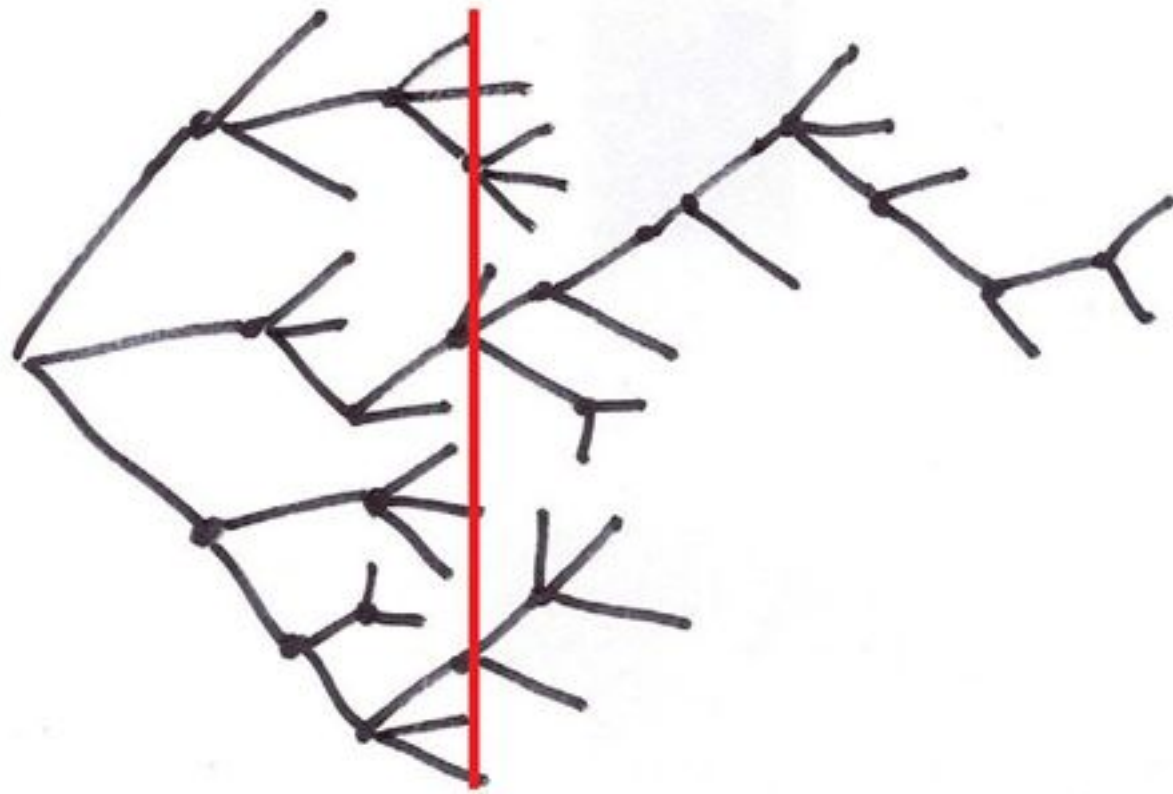
- Test your Post-It with a partner

- Two ways of thinking of this task

- Design
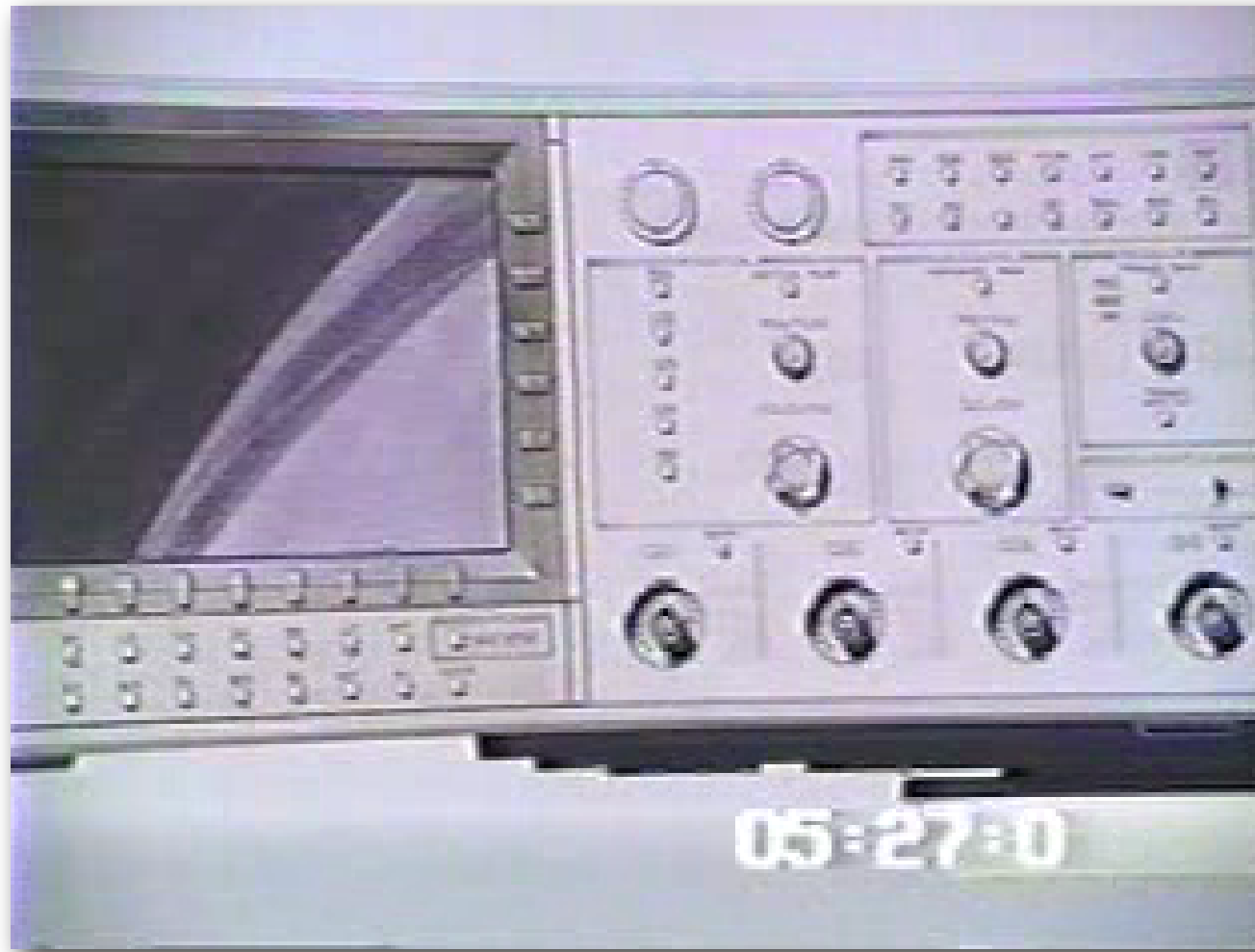 - "Sketching"

- Usability Engineering
  - "Paper Prototyping"

- The role of design is to find the best design
- The role of usability engineering is to help make that design the best

- Paper Interfaces in the wild
  - tektronix

Interactive Paper Interfaces

- Paper Interfaces in the wild
    - Designing an oscilloscope
    - Textronix only iterated in paper

- This example shows that poor keyboard design was discovered.

- Notice the way the user's unconsciously put their fingers in the right position to manipulate the dials as if they were physical

Interactive Paper Interfaces

- iPhone example
  - Notice how a cut-away can be used
  - http://www.youtube.com/watch?v=6TbyXq3XHSc

- Physical example
  - Notice how an entire kiosk can be "sketched"
  - http://www.youtube.com/watch?v=jkvqLd-CMyY

- We are going to paper prototype in class to fail fast on an interaction design

- POP
  - Digital Paper Prototyping Tool Example
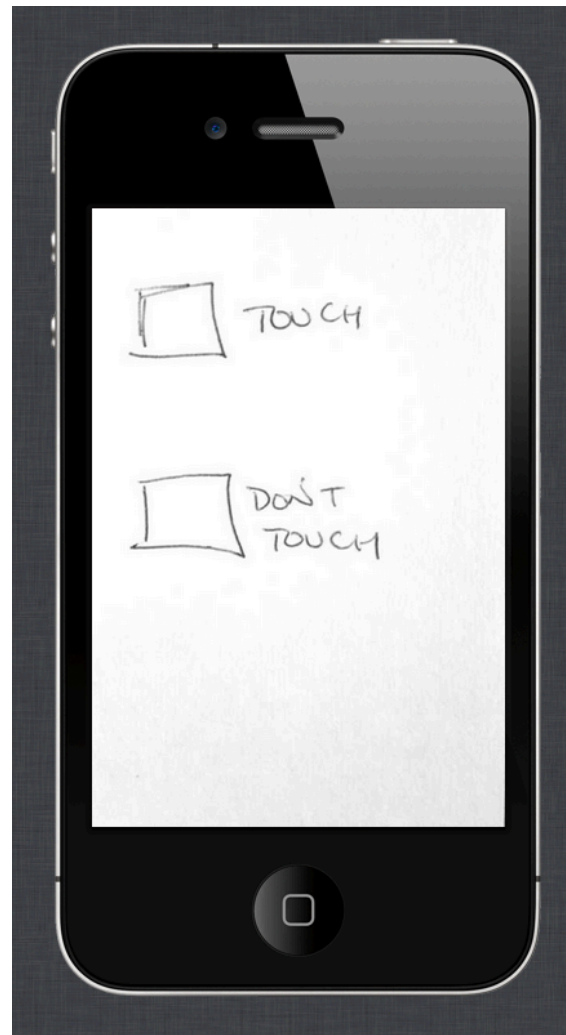
Interactive Paper Interfaces

- Balsamiq
  - Digital Interactive Wireframing Tool Example