Design Exploration

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* Slides marked Buxton are courtesy of Bill Buxton, from his talk "Why I Love the iPod, iPhone, Wii and Google" mini-con, 10-19 Sept, 2008, Brighton

Hall of Fame or Shame?

THINQ Smart Fridge
By LG

Hall of Shame!

Forget about UI specifics
Who wants this????

Interface Hall of Shame or Fame?

Amtrak Web Site (US trains)

Interface Hall of Fame/Shame!

Amtrak Web Site (US trains)

- Good
  - tells you what’s wrong
  - gets your attention
- Bad
  - doesn’t label where to fix issues
  - tells you that you made an error, because you didn’t know their codes
Hall of Fame or Shame?

Podcasts App
Apple Inc.

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

Hall of Shame!

Podcasts App
Apple Inc.

Outline

- Review task analysis
- Selecting tasks
- Sketching user experiences
- Storyboarding
- Informal UI prototyping tools

Task Analysis Review

- Task Analysis questions
  - Who is going to use the system?
  - What tasks do they now perform?
  - What tasks are desired?
  - How are the tasks learned?
  - Where are the tasks performed?
  - What’s the relationship between customer & data?
  - What other tools does the customer have?
  - How do users communicate with each other?
  - How often are the tasks performed?
  - What are the time constraints on the tasks?
  - What happens when things go wrong?

Selecting Tasks

- Real tasks customers have faced
  - collect any necessary materials
- Should provide reasonable coverage
  - compare check list of functions to tasks
- Mixture of simple & complex tasks
  - simple task (common or introductory)
  - moderate task
  - complex task (infrequent or for power customers)
What Should Tasks Look Like?

- Say what customer **wants to do**, but **not how**
  - allows comparing different design alternatives

- **Be very specific** – stories based on facts!
  - say who customers are (use personas or profiles)
  - design can really differ depending on who
  - name names (allows getting more info later)
  - characteristics of customers (job, expertise, etc.)
  - forces us to fill out description w/ relevant details
  - example: file browser story

- **Some should describe a complete job**
  - forces us to consider how features work together
  - example: phone-in bank functions

Using Tasks in Design

- **Write up a description of tasks**
  - formally or informally
  - run by customers and rest of the design team
  - get more information where needed

Manny is in the city at a club and would like to call his girlfriend, Sherry, to see when she will be arriving at the club. She called from a friends house while he was on the subway, so he couldn’t answer the phone. He would like to check his missed calls and find the number so that he can call her back.

Using Tasks in Design (cont.)

- **Rough out an interface design**
  - discard features that don’t support your tasks
  - or add a real task that exercises that feature
  - major screens & functions (not too detailed)
  - hand sketched
  - at **least 30 sketches** on the current assignment!

- **Produce scenarios for each task**
  - what customer has to do & what they would see
  - step-by-step performance of task
  - illustrate using storyboards
  - sequences of sketches showing screens & transitions

Scenarios (cont.)

- Scenarios are **design specific**, tasks aren’t
- Scenarios force us to
  - show how various features will work together
  - settle design arguments by seeing examples
  - only examples → sometimes need to look beyond
- Show users storyboards
  - get feedback

Design Process: Exploration

- **Discovery**
- **Design Exploration**
- **Design Refinement**
- **Production**
- **Expand Design Space**
  - Brainstorming
  - Sketching
  - Storyboarding
  - Prototyping
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Iteration
At every stage!

Design

Prototype
Sketch
Paper
Video
Tool
Program

Evaluate
Gut
Crit
Expert Eval
Lo-fi Test
User Study

Sketching:
A Quintessential Activity of Design
Courtesy Bill Buxton

The Problem with the SW Industry

Courtesy Bill Buxton
Adding Design…

Planning = Design?

OMA - Seattle Public Library

From Sketch to Prototype

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

Sketch

Prototype

Evocative

Didactic

Suggest

Describe

Explore

Refine

Question

Answer

Propose

Test

Provoke

Resolve

Tentative

Specific

Noncommittal

Description
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.

Sketching in Interaction Design

- Analogous to traditional sketching
- Shares all of the same key attributes
- More feel than look
- Must accommodate time & dynamics
- Phrasing

Design as Choice

Elaboration Reduction

Laseau (1980)

Experience Design

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

Elaboration Reduction

Laseau (1980)

Exploration of Alternatives

... 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

Experience Design

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

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

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
Informal UI Prototyping Tools

- Support advantages of low-fi paper prototypes
  - brainstorming
  - consider different ideas rapidly
  - do not require specification of details
  - incomplete designs
  - need not cover all cases, just illustrate important examples
- Add advantages of electronic tools
  - evolve easily
  - support for "design memory"
  - transition to other electronic tools
  - allow end-user interaction

Designers’ Outpost:
A Tangible Interface for Designing Information Architectures

- Combines physical & virtual
  - physical post-its, virtual feedback
- Supports existing practice
  - affordances of paper
  - collaboration
  - large, persistent representation
- Adds advantages of e-media
  - editing, reuse, distribution
  - hand-off later to other tools
DENIM: Designing Web Sites by Sketching

• Early-phase navigation & interaction design
• Integrates multiple views
  – site map
  – storyboard
  – page sketch

Low-fi Prototyping & Testing

Summary

• 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

Next Time

• Lecture
  – Human Abilities

• Readings