Iterative Design

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COMS 4170
Goal 2
When the needs and abilities of users are unclear, design systems by learning from iteration and experimentation.

Part 3: Editing the Party Planning Committee
The interface to edit the party planning committee (PPC) is a drag and drop direct manipulation interface as described below.

1. The PPC UI needs to display two lists:
   1.1 a list of all the employees seen here, and
   1.2 a list of people on the party planning committee.
2. In its default state, the party planning committee is initialized with:
   2.1 see its default state, the party planning committee.
3. Each list must have a div at the top of the PPM, serve as a drop target.
4. Using jQuery Drag and Drop will be implemented the modal.

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Keep a list of the party planning committee

Clear needs, abilities, goal

Unclear needs, abilities, goal
Milestone 2

What are domains and specific needs that involve:

Interact with multiple videos on a page in a way that brings more value than simply watching them?
So far, you have brainstormed ideas

- Ideas are a good starting point.
- But ideas are cheap
- Let people steal your ideas.
- **Execution** is all that matters.

*The best way to have a good idea is to have lots of ideas.*

- Linus Pauling
Design process:
How do we get from Idea to Product?
What we expect design to be:

Idea -> Product
What design is:

Idea

Product
The Waterfall Model

Idea
Requirements
Design
Implement
Fix bugs
Finished Product!
The Waterfall Model

Phone + IPod + Internet

- One button
- Touch Screen
- Soft keyboard

Idea

Requirements

Design

Implement

Fix bugs

Finished Product!
Problem: The Waterfall Model is linear. It cannot accommodate unknowns.

Idea

Requirements

Design

Implement

Fix bugs

Finished Product!

Phone + iPod + Internet

* One button
* Touch Screen
* Soft keyboard
Barry Boehm (USC) 1986:
The design process should mitigate risk
Waterfall Model vs. Risk Mitigation?

Idea
Requirements
Design
Implement
Fix bugs
Finished Product!
Waterfall Model vs. The Spiral Model

Idea
Requirements
Design
Implement
Fix bugs
Finished Product!
Iterative Design

Design → Prototype → Evaluate → Design
Instead of the Waterfall Model…

**Idea**

**Requirements**
- Phone + IPod + Internet
- One button
- Touch Screen
- Soft keyboard

**Design**

**Implement**

**Fix bugs**

**Finished Product!**
Iterative Design: Every new concept is a risk. Every risk needs to be prototyped.
Iterative Design: Every new concept is a risk. Every risk needs to be prototyped.

Idea

Touch screen

Soft keyboard

One button

Product

Design

Prototype

Evaluate

Design

Prototype

Evaluate

Design

Prototype

Evaluate
When you design:

What are the new concepts you need to prototype?
Idea:
Autonomous Wandering Interface
In the video:

What were the new concepts that we would need to prototype?
In the video:

What were the new concepts that we would need to prototype?
Every new concept is a risk.
Every risk needs to be prototyped.
What concepts did they prototype (and how)?
What concepts did they prototype (and how)?
Determine the risky new ideas

Prototype the risks

Can the drone carry the stuff?

Can users select from menu?

Can users select symbols?

Can the camera detect hands?

Can users select outdoors?
What new risks were learned from instantiation?
Drift: How do you think the prototypers felt?
Prototyping can feel like this:
Iterative Design: Every new concept is a risk. Every risk needs to be prototyped.
Multiple Video project
Your examples

- For each idea, is it specific?
  what person
  uses what videos and
  how they interact with it
to achieve a goal.

For all the ideas, what are the major risks,
and how should we prototype them?
Language learning

Tonal languages like Chinese and Vietnamese can be challenging to learners whose native languages don’t have tones. For example, the Vietnamese ma means “ghost,” but with different tones, má can mean “mother” while mà means “but.” An interface can have videos for each of the different tones grouped by vowel to help language learners distinguish between tones. This can help students familiarize themselves with tones.

what person uses what videos and how they interact with it to achieve a goal.
Fitness

For a person trying to create a regimented workout routine: allow the user to save workout videos to a calendar so that he/she can see each day of the month and select the folder on that day that will contain the exercises to be completed. allow the user to add notes indicating the number of reps, amount of time, and weight to use for each exercise.

what person uses what videos and how they interact with it to achieve a goal.
Health

Visualizing disease progression...
When user wants to share a video with other users, user may want to hide some sensitive parts of the video since health information is sensitive and should be protected. Allow user to blur areas of video for protection.

what person uses what videos and how they interact with it to achieve a goal.
Dance class

For workout instructors trying to plan a class: allow instructors to drag/drop music videos to create a playlist for the class. The playlist should show the total time of the videos so that the instructor knows how many songs to add to make it the length of the class.

what person uses what videos and how they interact with it to achieve a goal.
Travel planning

Planning daily tourist itinerary by using video maps to chart out what is near one another (similar to google maps), having transportation automatically align itself to day schedule, and restaurant recommendations pop up in each area.

what **person** uses what **videos** and how they **interact** with it to achieve a **goal**.
Musicians

Musicians learning a song that has been covered by multiple artists need to be able listen and compare each version at multiple sections without needing to restart the video each time in order to understand the different ways the track can be interpreted.

what person uses what videos and how they interact with it to achieve a goal.
Beauty

Show multiple videos side-by-side to demonstrate how eyeshadow/eyeliner techniques differ based on eyeshape and eyelid types.

what person uses what videos and how they interact with it to achieve a goal.
GIF Creation

Finding the perfect GIF moment from several videos of the same thing

what person uses what videos and how they interact with it to achieve a goal.
Iterative Design: Every new concept is a risk. Every risk needs to be prototyped.

Idea

new concept

Product

Design

Evaluate

Prototype
What are some of the risks?

- Learn tones in Chinese and Vietnamese
- Video workout calendar
- Visualize disease progression
- Collaborative Workout mix
- Tourism videos near an area
- Compare song performances
- How to apply eyeliner
- GIF Creation
Iteration 1: Basic Concepts/Risks

- Do the videos exist?
- Can you get them on your own webpage?
- Can you press play programmatically?
Milestone #3: (due noon Wed)

• For 3 ideas:
  - State the problem in terms of:
  - Do the videos exist? (pick good videos)

• For any video:
  - How to get them on the screen?
  - Do do you press play programmatically?

• Reflection:
  - What unexpected things did you learn?

• Post it to piazza, with screenshots of your videos and implementation

what person uses what videos and how they interact with it to achieve a goal.
Summary
Goal 2
When the needs and abilities of users are unclear, design systems by learning from iteration and experimentation.

Part 3: Editing the Party Planning Committee
The interface to edit the party planning committee (PPC) is a drag and drop direct manipulation interface as described below.

1. The PPC UI needs to display two lists:
   1. A list of all the employees names, and
   2. A list of people on the party planning committee.
   * In its default state, the party planning list is empty.
   * Each list must have a div at the top of it, which acts as the drop target.
2. Using jQuery Draggagle and Draggable, connect the head of the of the PPC list, a must also be there names from the PHP.
   * This must be implemented in the Model.
3. To cut that an element is draggable, in background turn light yellow, and the.
   * While the item is being dragged, the box.
4. While the item is being dragged, it she.
   * While the item is being dragged, the default.
5. When the item is dragged over the div.
6. If an item is "dropped" anywhere other than the user started dragging it.

Note:
When the user toggles between the Logging and Party Planning List should be stored in a javascript variable that be there. However, for this implementation, it
Please submit your HTML, CSS, and JS files.

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- Linus Pauling
How do we get from idea to execution?
The Waterfall Model is the intuitive execution process. Problem: It cannot accommodate unknowns and risks

Phone + IPod + Internet
* One button
* Touch Screen
* Soft keyboard

Idea
Requirements
Design
Implement
Fix bugs
Finished Product!
Iterative Design mitigates risk:

Every new **concept** is a risk. Every risk needs to be **prototyped**.
Iterative Design mitigates risk:

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Idea

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Product
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