Medium Fidelity Prototyping

No screens

Prof. Lydia Chilton
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Say your name
The Iterative Design Process

- **Challenge**
  - Brainstorm & Research
  - Problems and Solutions

- **Ideation**
  - Test them
  - Ideas

- **Implementation**
  - Identify technical risks
  - and explore options
  - Test them

- **Product**
Design requires you to explore and test many risky features.
To minimize risk on novel designs, use iteration on each risky aspect of the design.
Here is a video of an idea.

Look for all the risky ideas to prototype!
Concepts to prototype

• Find *your* person
• Tracking and following the person
  • Tracking the soccer ball
• Recognize actions:
  • Scrolling through menu option
  • Fist to select option
• Project a soccer goal on the group
• How to pull up the menu
• Throw the menu on the wall
  • Select on wall
  • Spin
• NIGHTTIME ONLY – can you even fucking see it during the day.
• Interact with other drones
  • Crash?
  • Interact with other objects: collision avoidance

• Distinguish between fist to interact with drone or a person?
• USE THE HAND to project on
  • Touch select
• What if your hands are full?
• PATH!!!! How does it know where the roads are?
  • Map, gps
• UNDO?
• Going on a run – how does it track fitness?
• SECURITY RISK
  • So flashy – makes you a target.
Concepts to prototype?
What did they prototype?

See what they actually focused on first.
What did they actually prototype?

- How fast can users select menu items.
  - Can they select them at all.
  - How accurate
  - Getting to the part of the menu
    - The rotating thing
  - Move your hand over the item
- Didn’t show outdoor daylight
- Camera, projector, itouch
  - WILL IT FLY
- Indoor study:
  - Avoiding Wind, lights
- BATTERY LIFE

- Drift was distract
- Computational power
  - No remote server!!!!
- HUMAN DETECTION
  - How long does it take to recognize a
    - Person
    - Action
  - Do you enjoy it?
Concepts

Drone projection

User interaction with projection

Prototypes

Can the drone carry the stuff?

Can users select from menu?

Can users select symbols?

Can the drone detect hand position?

Can users select outdoors?
They discovered a BIG problem.

DRIFT
How could they have avoided learning this two years into the project?

By prototyping this risk on users in the environment
How do I solve problems?

By learning from prototyping and testing on users in the environment.
How do I select a problem?

Nadia, age 11

Ace this fractions test

Identify a specific person with a specific need
Who is the specific person and specific need?

No one.
Starting with a single real user is better than a flashy idea with no user or need.
How will you continue to prototype and test risks?
Option 1. A Technical Prototype

What technical elements do I need to get working?
• Drag and drop
• Playing videos at different speeds
• Playing notes on a piano
• Routes and Navigation

Set a goal for yourself - email it to your TA for comments and approval.
Implement it.
Get Feedback. Test it on someone (or at least show it to someone) to get feedback
Option 2. A Look-and-Feel Prototype: Figma

As far as I know, none of the prototyping tools (figma, InVision, Adobe XD) allow you to play video or audio files.

However, Google Slides does.

So you could create UI images in Figma, and load them into Slides, then place the videos and sounds on top of it.
Option 2. A Look-and-Feel Prototype: Slides

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**Self Defense Moves for Women**

Regardless of your size, you can overpower anyone with these moves!

**MOVE 1 of 4: THE ARM GRAB**

![Image of a self-defense move](image-url)

**How to respond?**
Self Defense 101

No matter your size, you can defend yourself against anyone.

1. The arm grab
Pro Tip: take screenshots of HTML widgets
No matter what:

Set a goal for yourself - email it to your TA for comments and approval.
Implement it.
Get Feedback. Test it on someone (or at least show it to someone) to get feedback.
Homework 11: Due Wednesday 4/22

• Improve your prototype and move to a medium-fidelity design
  • Set a design goal
  • Implement
  • Evaluate
Wednesday People:
Fill out participation when you see the video!