



# Human-Computer Interaction Design Studio



Alan's idea:  
attach the wires to  
the middle tubing

Bill: copyright  
creation of license



Scott: a gate that shows  
who walked through it last

Bill: a gate that measures  
ceremonial gates

Announcements

P2: Shadowboxing

Brainstorming

P1: Show and Tell

# Announcements

P2: Shadowboxing

Brainstorming

P1: Show and Tell

# First CS247L tonight

Every Thursday 6pm-7:50pm

in d.school Studio 1

1 unit

Tonight: Bill Verplank, intro to sketching

Bill is...

Co-creator of CS247

CCRMA lecturer

Collaborator on the Xerox Star

# CS547 HCI Seminar

Every **Friday 12:50-2pm** in **Gates B01**, 1 unit

A range of speakers touching on user interface design, social media, collaboration, psychology, design methods and ethnography.

A useful supplement to CS247!

<http://cs547.stanford.edu>

# Course Q & A

CS247 Q&A Forum on piazza.com:

**piazza.com/stanford/winter2013/cs247**

For questions likely to be of interest to other students (e.g., clarification or guidance on projects), please **post to the online forum**.

More sensitive questions should be sent to the course staff at **cs247@cs.stanford.edu**.

# Enrollment Update

First round of enrollment updates for the waitlist coming once we have collected P1

Subsequent updates will be announced on a rolling basis

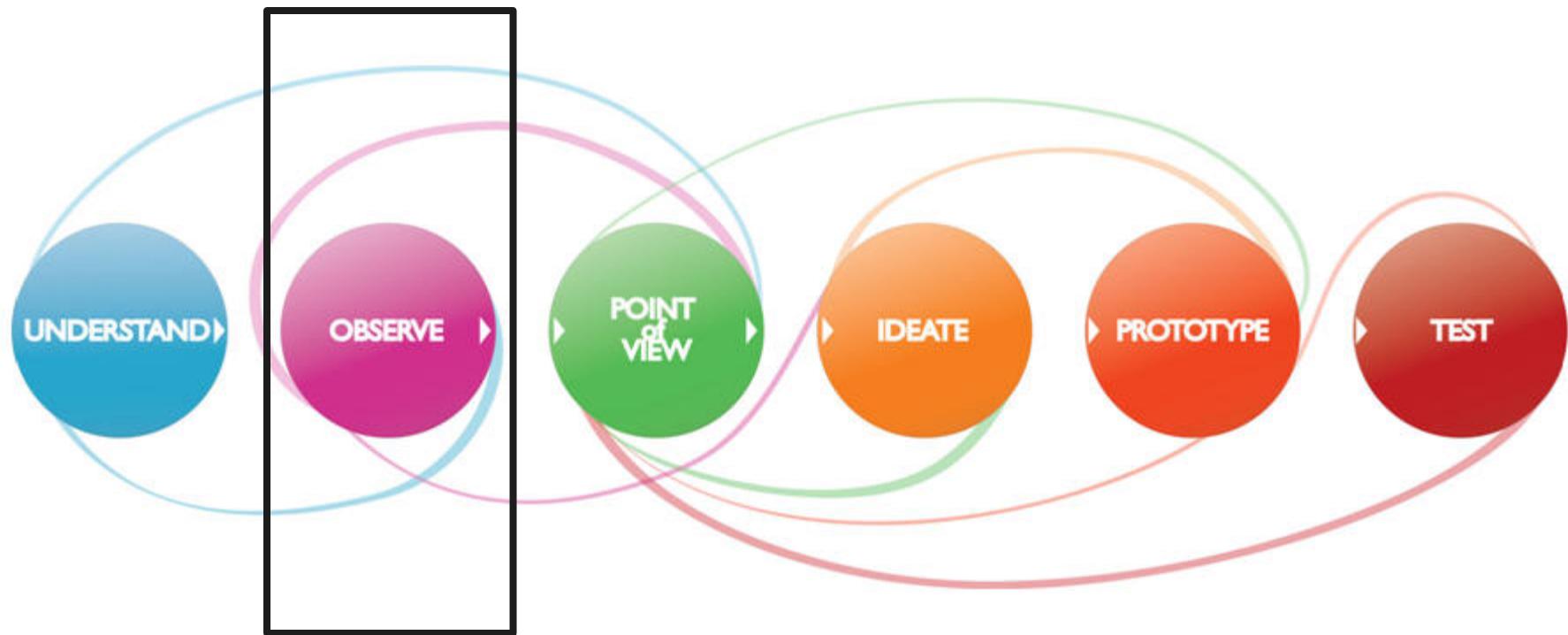
Announcements

P2: Shadowboxing

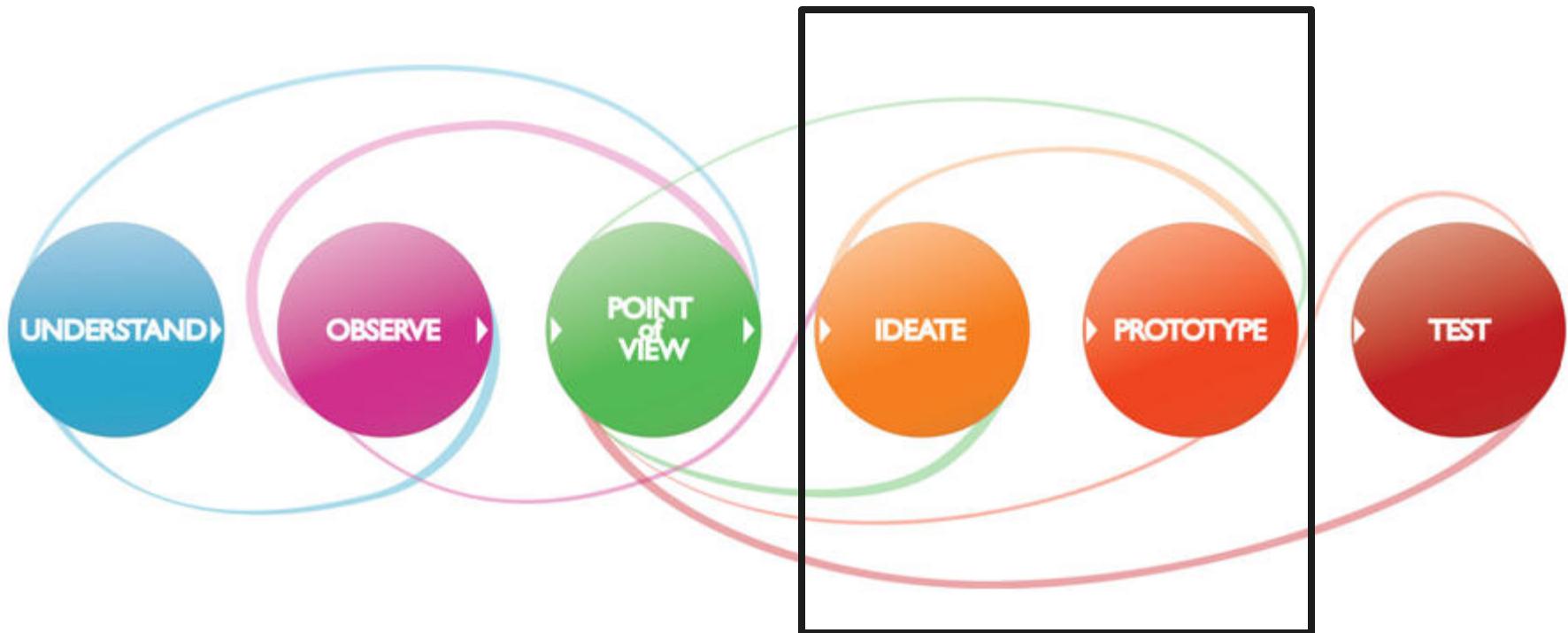
Brainstorming

P1: Show and Tell

# P1: observation



## P2: ideation and prototyping





# The future of interaction?

Many input modalities:  
touch, voice, gesture

Yet, still fingers on glass:  
2D interaction surface,  
limited input bandwidth

A dark silhouette of a person's head and shoulders, facing right, holding a smartphone vertically. The phone's screen displays a grid of colorful app icons.

# The future of interaction?

Entire interaction surface  
is the size of your pocket

The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it.

— Mark Weiser

# Calm Technology

Weiser, The Computer for the 21<sup>st</sup> Century

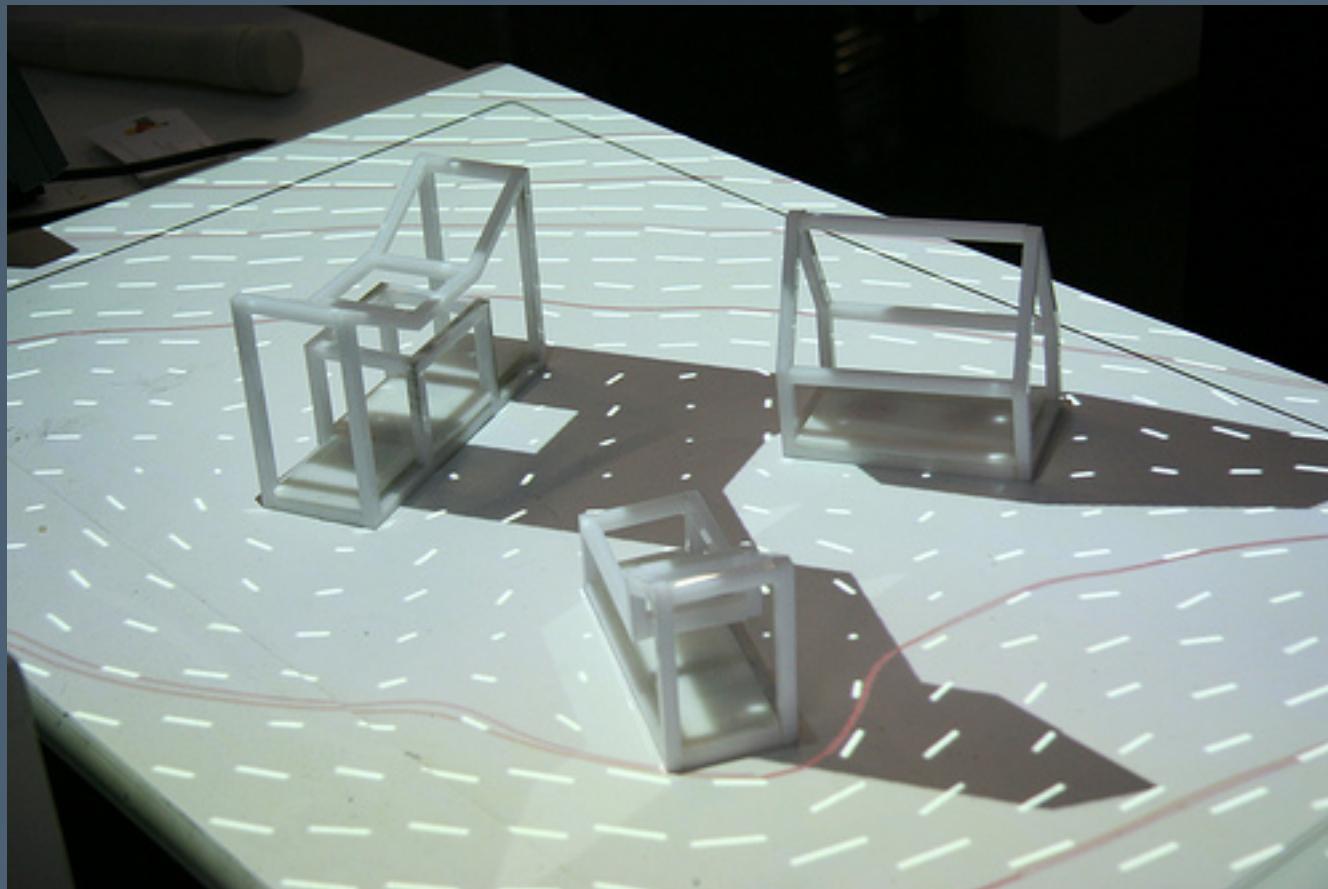
Computing should not just become ubiquitous:  
it should vanish into the background.

Interactive phones, tablets, laptops:  
ubiquitous but foregrounded

Pencils, hammers, analog phones:  
calm technologies



# Shadows as Interaction



Urp, MIT Media Lab



## P2: Shadowboxing

**Goal:** design an application for public engagement that uses only human shadows as input

**Teams:** four people

**Technology:** background subtraction in HTML and Javascript, or DIY (e.g., Kinect)

Choose a public engagement space, brainstorm ideas, and implement a functional prototype

# P2: Shadowboxing

**Before next Tuesday's class:** form a team of four students, submit it via the Google Form linked on the P2 assignment

**Due 1/22:** complete prototype, design sketches including alternative ideas, video demo

**In class, Tuesday 1/22:** project showcase

<http://hci.stanford.edu/courses/cs247/2013/p2.html>

# Forming Groups

The screenshot shows the Piazza interface for a course titled "CS 247". The top navigation bar includes "Q & A", "Course Page", and "Manage Class". The sidebar on the left lists various posts categorized by time: PINNED, TODAY, and LAST WEEK.

**1. Form project & study groups (From The Piazza Team)**: A pinned post from the Piazza team. It asks users to form groups and provides a link to create a post. A red circle highlights this post.

**2. 1 open search:** A search result for "1 open search" showing one item. It lists "Molly Mackinlay (mzm2@stanford.edu)" and "many students". A red circle highlights this search result.

**3. add new post:** A modal window for creating a new post. It has two options: "I'm one student looking for more people to work with." and "I'm from a group looking for more students.". It also includes fields for "Name" (Vidya Ramesh) and "Email" (ividya@stanford.edu). A red circle highlights this modal window.

**Bottom of the page:** Includes "Average Response Time:", "Special Mentions:", "Online Now | This Week:", and a summary of 8 posts and 15 responses.

Announcements

P2: Shadowboxing

**Brainstorming**

P1: Show and Tell

Creativity is difficult.

Creativity is difficult.

But, it can be developed.

# Brainstorming Rules

**Defer judgment.** Separate idea generation from idea selection. For now, suspend critique.

**Encourage wild ideas.** Breakthrough ideas are next to the absurd ones.

**Build on others' ideas.** Listen and add to the flow.

**Go for volume.** To have a good idea, have lots of ideas.

**One conversation at a time.** Keep momentum; save side conversations for later.

**Headline.** Capture the essence and move on. Don't stall the group with a long-winded idea.

# Brainstorming Success

**Fluency:** you leave with a lot of good ideas. A good brainstorm can result in ~100 ideas/hour.

**Flexibility:** you have a wide variety of concept directions hidden in the mess of ideas.

**Springboards:** you leave with a handful of great springboards that you can start to prototype.



The room looks like this!

# P1: Show and Tell

**Time to share your P1 insights!**

Break up into five equal-sized groups.

Step 1: tell a partner about your poster.

Step 2: Round-robin sharing of your poster.

Each person has **3 min**, including:

*You:* Walk through your results in **1min**

*Partner:* Prompt with a starter question

*Everyone:* Engage, discuss, critique, **2min**

# P1: Show and Tell

**Do not leave class without giving your poster to the staff!**

# A Note on Critique

Critique expands the creator's understanding of their own ideas.

Critique does not shut someone down.