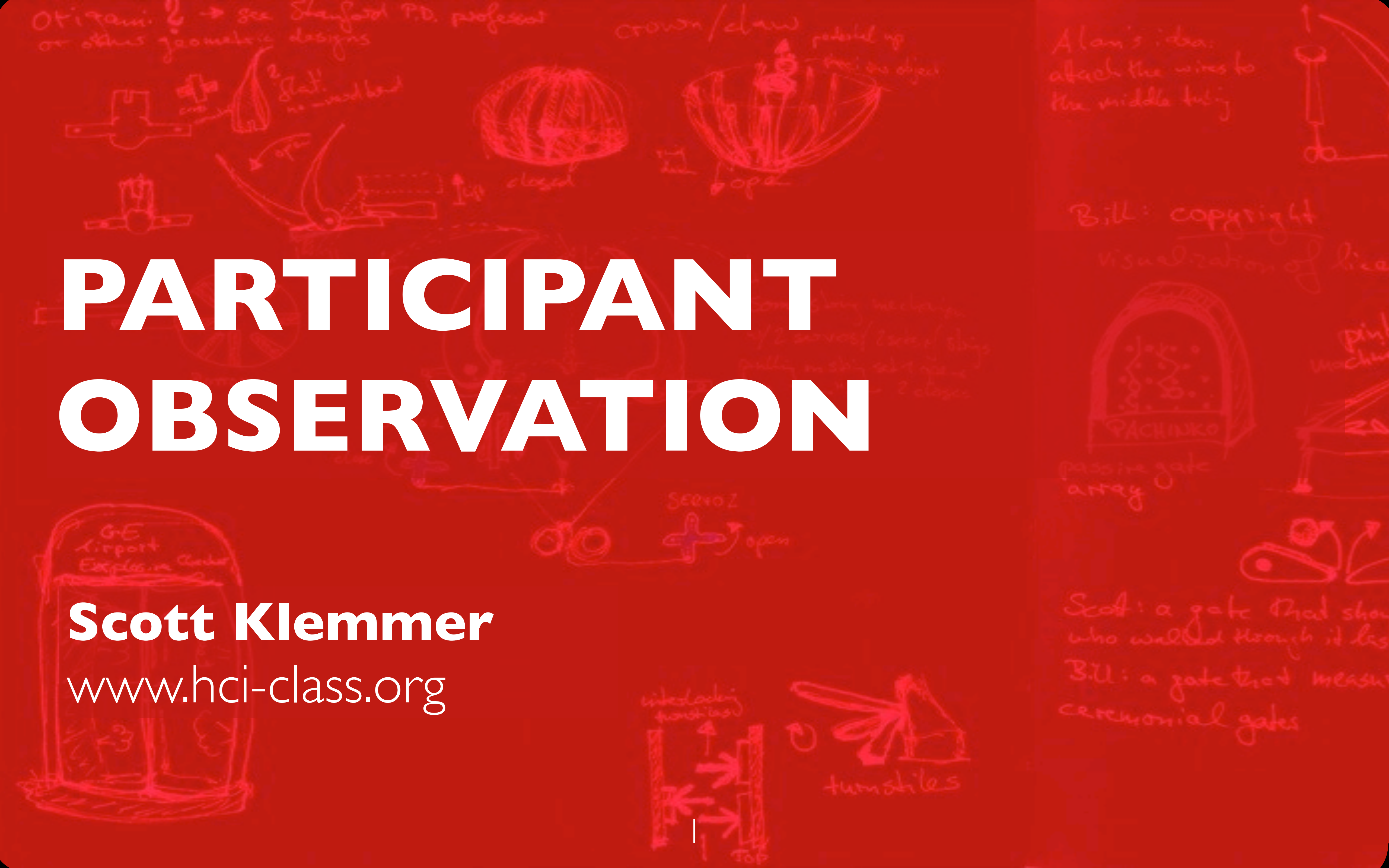# PARTICIPANT OBSERVATION

Scott Klemmer

www.hci-class.org

Additional Needfinding Strategies

scott klemmer

Longitudinal or Sporadic Behavior?

Diary Studies

- Give people a diary that they complete at a specified time or interval
- Structured task
- Can use journals, cameras, voice, video
- Tailor the recording to the context
- Can scale better than direct observation
- Easier tools -> better results
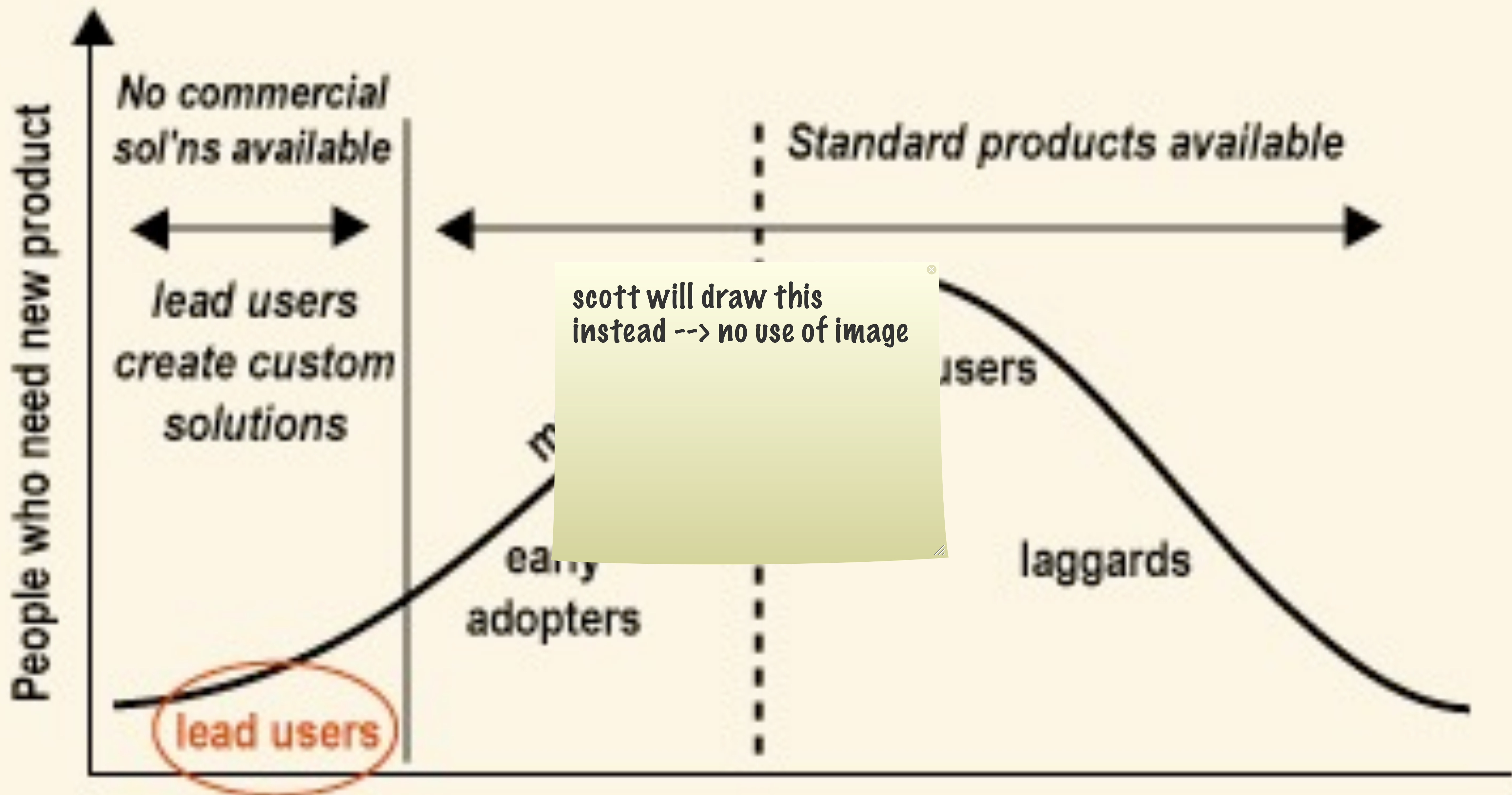- May require some practice, training, reminding

Experience Sampling

Lead Users

Source: von Hippel, Eric (1986) "Lead Users: A Source of Novel Product Concepts," Management Science 32, no. 7 (July):791-805.

Extreme Users

Keeping Users in Mind

Personas

- A model of a person, an example.
  - includes demographic information, but should also capture a person's motivation, beliefs, intentions, behavior and goals
- Draw a picture of your persona or use a photo
  - give him or her a name, an occupation, a background, a social situation, some hopes, dreams, and goals etc. Give the persona a story to tell
- Knowing what our persona thinks, does, and feel help build empathy
  - so that you can understand the state of mind, emotion, philosophy, beliefs, or point of view of the user
- Empathy leads to insights which leads to design opportunities

Ultimately, it's the design

CREATING DESIGN GOALS

Scott Klemmer

Herb Simon and the Ant

- An ant's behavior looks complex, but the complexity is (mostly) in the environment.

- So if we change the environment, we change the behavior.

- Design transforms existing situations into (hopefully) preferred ones.

All design is redesign

- At least for me, that says we ought to have a really good sense of what the existing situations are and what preferred means for us. "preferred" has to do with both the user's goals and your point of view as a designer.

So far...

- So we have a sense of what people *do* and their high-level values, goals, and contexts.
- That'll help us connect observation to design. What's our lever?

You'll be able to

- When you are designing, what matters? What should it accomplish?
- Estimate whether different designs are meaningfully different

You're doing this already

- Design often includes activity analysis *implicitly*

- Problem: leap to (just) one solution.

- Our goal is to make it explicit

Making this explicit

- Gives you a *conceptual* representation
- This increases your mindfulness as a designer, connects you to the texture of the domain, and helps you communicate and discuss with other stakeholders
- Having this intermediate, conceptual representation makes it easier to be creative because you're taking a couple
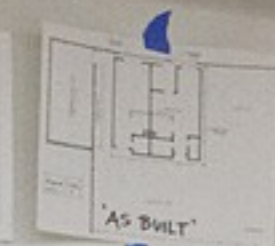
The outcome of activity analysis

- What are the steps?
- What are the artifacts?
- What are the goals? (how you'll measure success)
- What are the pain points?

Example: steps

- Unlock driver's door
- Take a seat behind the wheel
- Insert key in ignition switch
- Turn key fully clockwise
- When engine starts, release the key
- from http://www.nwlink.com/~donclark/hrd/isd/cognitive-task-analysis.html

Example: artifacts

- key
- car
  - door-lock
  - ignition switch

Example: goals

- (your point of view comes in here)
- Turn on the car?
- Pick up bread?
- Make a meal?
- Have a satisfying evening?

Example: pain points

- In the narrow version: necessary to put the key in? It's already in the car. Why not just drive off?
- In the slightly broader framing, the pain point could be needing a car to get bread. (Alternatively, bread could be delivered, or you could walk/bike/...)

That helps us create interfaces that…

- From Hackos and Redish: Usable Interfaces
- Reflect workflows that are familiar or comfortable
- Support users' learning styles
- Are compatible in the users' working environment
- encompass a design concept (a metaphor or idiom) that is familiar to the users
- Have a consistency of presentation (layout, icons, interactions) that

- Are the things that your interface is designing for something that users actually do -- or might want to do? Activities can and do change over time -- often evolving along with technology -- and you don't need to just make current paths easy.

Actvitity Analysis is easiest for

- Workflows like doing taxes or travel planning
- Repeated activities, like scheduling (why does it take 17 emails?)

Challenge: we don't design tasks

- Activities and objects don't map 1:1
(a smartphone is not just one "activity")

- We design artifacts. So a forum has multiple tasks.

8636 **FW: [SERC 21127:] Upcoming Kayak Piloting Clinics**   Jo

                                                            jo

... From: f@... Cc: er@... Sent: Wed, Mar 20, 2013 3:44 PM PDT [SERC 21127:] Upcoming...

8637 **quick report from tonight's March Board meeting**   Di

                                                            di

Greetings... Gratitude was sent our way by NPS for the work on Olga ...can't thank you enough for the time, the the craft and the care...

8638 **Re: quick report from tonight's March Board meeting**   Su

                                                            m

I for one am INCREDIBLY appreciative of these notes, the communication and information is WONDERFUL. Â Â S   Â ... From:...

8639 **Re: quick report from tonight's March Board meeting**   M

                                                            m

Yes, it's great to know this stuff and I am in awe of your energy and dedication. Regards, Madeleine ... [Non-te message have been removed]...

8640 **Re: quick report from tonight's March Board meeting**   C

                                                            ka

Yay, Diane. thank you so much. ... From: r@...> To: "   com>, "Diane Walton"...

8641 **Why They Posted "Danger: BIOHAZARD" on Tuesday**   M

                                                            m

Hey all, I was curious about why those "Danger: Biohazard" signs were posted on the Beach Tuesday, so I did around the Web. It turns out...

8642 **Re: Why They Posted "Danger: BIOHAZARD" on Tuesday**   E

                                                            jo

Mark: Thanks for this information. What I take away from this experience is that we must be very careful to n the day before the SF PUC ...

8643 **Mar. 22 Happy Hour: "Paul and Melissa are coming! Paul and Melissa a**   ki

                                                            ki

Dolphins, Come have some fun next door Friday night at an extra special Happy Hour. Same bat time, same b we get to hang out with our former...

Have multiple related activities

- The same person uses the same design to achieve slightly different things
- Also, different people may do things slightly differently
- Because they have slightly different goals, expertise, …
- For empathy, keep 'em human

Recap

- What are the steps?
- What are the artifacts?
- What are the goals?
- What are the pain points?

You can and should adapt this

- More or less formal?
- Diagrams? Text? Pictures? Video?
- Narrow or broad?
  - Individual v. group viewpoint?
- Include more or other things like joy points, not just pain points

Be creative and have fun!

Interviewing

scott klemmer

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Choosing Participants

- Representative of target users
- May be current users of a similar system
- Might also be the *non-users*

Say you were designing...

- A lecture support system
- Who would you interview?

Recruiting Participants

- Get a diverse set of stakeholders
- Use incentives and motivation
- Approximate better than nothing

Approximate if Necessary
(may not be ideal, but better than nothing)

The Importance of Being Curious

Malcolm Gladwell
on Journalism

from the introduction to What the Dog Saw

What Are Good Questions?

"Is the daily update an important feature to you?"

"Would you like stores with less clutter?"

What would you like in a tool?

Other Types of Questions to Avoid

- What they would do / like / want in hypothetical scenarios
- How often they do things
- How much they like things on an absolute scale
- Avoid binary Questions

"Tell me a story about yourself"

Good Questions

Conducting An Interview

- Introduce yourself, explain your purpose
- The interview is about them, not you!
- Begin with open, unbiased questions
- Ask the question and let them answer

(a little bit of)
Silence is Golden

Follow up

- Adjust your questions to their previous answers
- Ask questions in language they use / understand
- Pick up on and ask for examples
- Be flexible

Scheduled Interviews Facilitate Depth

Plans are useless
Planning is invaluable

Do a Trial Run first
(gives you practice, catches bugs)

where to interview?

should you record audio or video?

Audio/Video: Drawbacks

- Time-consuming to review / edit
- Can change participants' responses
- Requires permission

Audio/video: Benefits

- A robust record
- Highlights are GREAT for communication
- Helps you focus on interviewing

Photos Are Powerful Reminders

What is are the gems?

- You've uncovered a surprise or found what is missing
- You can explain why people do unusual things
- You want to tell others about what you have learned

Share with your team

- Stories
- Photos
- Sketches
- Quotes

Save Records - It'll help later

- Keep photos, notes, and artifacts
- Helps tie all design to use, rather than debating things on an abstract plane

Further Reading

- Mike Kuniavsky, Observing the User Experience
- Beyer and Holtzblatt, Contextual Design
- Jeanette Blomberg
- Paul Dourish
- Diana Forsythe, "It's just a matter of common sense"

Qualcomm MCP

"You Can Observe a Lot Just by Watching"

—Yogi Berra

4

Tacit Knowledge:
Deep Hanging Out

1. What do people do now?
2. What values and goals do people have?
3. How are these particular activities embedded in a larger ecology?
4. Similarities and differences across people
5. ...and other types of context, like time of day

Process v. Practice

Jack Whalen & the Call Center

Apprentice

- Set up a partnership with the people to be observed
- Be taught the steps in the process
- Observe all of the practices
- Validate what you are observing with those observed as you go along

Look for workarounds & hacks

"Errors" are a goldmine

WHEN USER

HITS MACHINE

will be receiving
permission from
stu and parc

Walmart

To learn more...

- Institute of Design at Stanford, http://dschool.stanford.edu
- Kuniavsky, *Observing the User Experience*
- Beyer & Holtzblatt, *Contextual Design*