# DESIGN AT LARGE

real-world, large scale
...and sometimes disruptive

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# Udit

## Experience Interaction #1

**APP INTERACTOR –** I talked to Aveek Biswas, a former Teaching Assistant of CSE 8A class wherein his duties revolved heavily around basic student interactions in the form of in-class discussion section quizzes.

**DESCRIPTION OF APP IDEA –** A web application that would work similar to iClicker for in-class voting. The two differences are that it can have any type of questions and not just 5 option MCQs. Additionally, the TA or Professor would see insights of the class quiz results at the end in an intuitive way.

**STEPS REQUIRED IN PLANNING –** The facilitator behaves as the application itself. The user flow of interaction in this app for an instructional staff is -
*Login Screen -> Classroom creation -> Viewing Participants ->*
*Create a Question -> Get Responses -> Freeze Voting ->*
*Repeat ( Create, Get Responses, Freeze ) for another question ->*
*Stop Classroom -> Save Results -> Get Insights.*

**EXECUTION –**
- Aveek wanted the interaction with the application to be smooth and quick. However, he mentioned that security is important, and login would have to involve SSO. When asked by the app to create a classroom, he created a classroom with a unique code and share it with students. Moreover, he wanted an additional layer of security wherein only students in his geographical proximity could join the classroom.
- In the classroom view mode, he mentioned that he was seeing information about the student's grade / performance so far in the class which would help to calibrate the in-class questions that would he'd subsequently ask. He asked the Yes/No question "Does any one know about cookies?" to the class and the decided to skip the topic based on the responses of the students in the app.
- For a couple of other questions, after freezing the responses - the app showed him the subjective responses in the form of word clouds and multiple choice questions in the form of bar graphs. Aveek was satisfied by this and said that this is good for interpretation by the students at a quick glance. Lastly, the most important thing that he mentioned is that teachers should only be able to view demographic aggregated statistics after class ends whereas students should have all questions and responses saved on their app for a quick reference in the future.

**OVERALL FEEDBACK**
- I asked Aveek how this application could make things better for students. He gave an example of an experience interaction where he creates a question and students vote individually. Then instead of freezing the question, he continues it and asks them to vote again after discussing with their neighbors. He feels that the capabilities of a web application would be helpful in showing the difference of how opinions changed post discussion.
- The application interface described to him in the experience interaction was complex involving details of the classroom, student, time remaining etc. Feedback obtained was that this would be too cluttered and would distract the students from the task at hand.
- Most importantly he said that by using the power of web applications we can have all the settings that are available in iPhone such as bold text, enlarged font, night mode to make the experience more accessible to everyone.

The feedback obtained about reducing design complexity and incorporating accessibility was immediately used for in the planning steps of the next experience interaction.

# Neve

## 1) Reddit
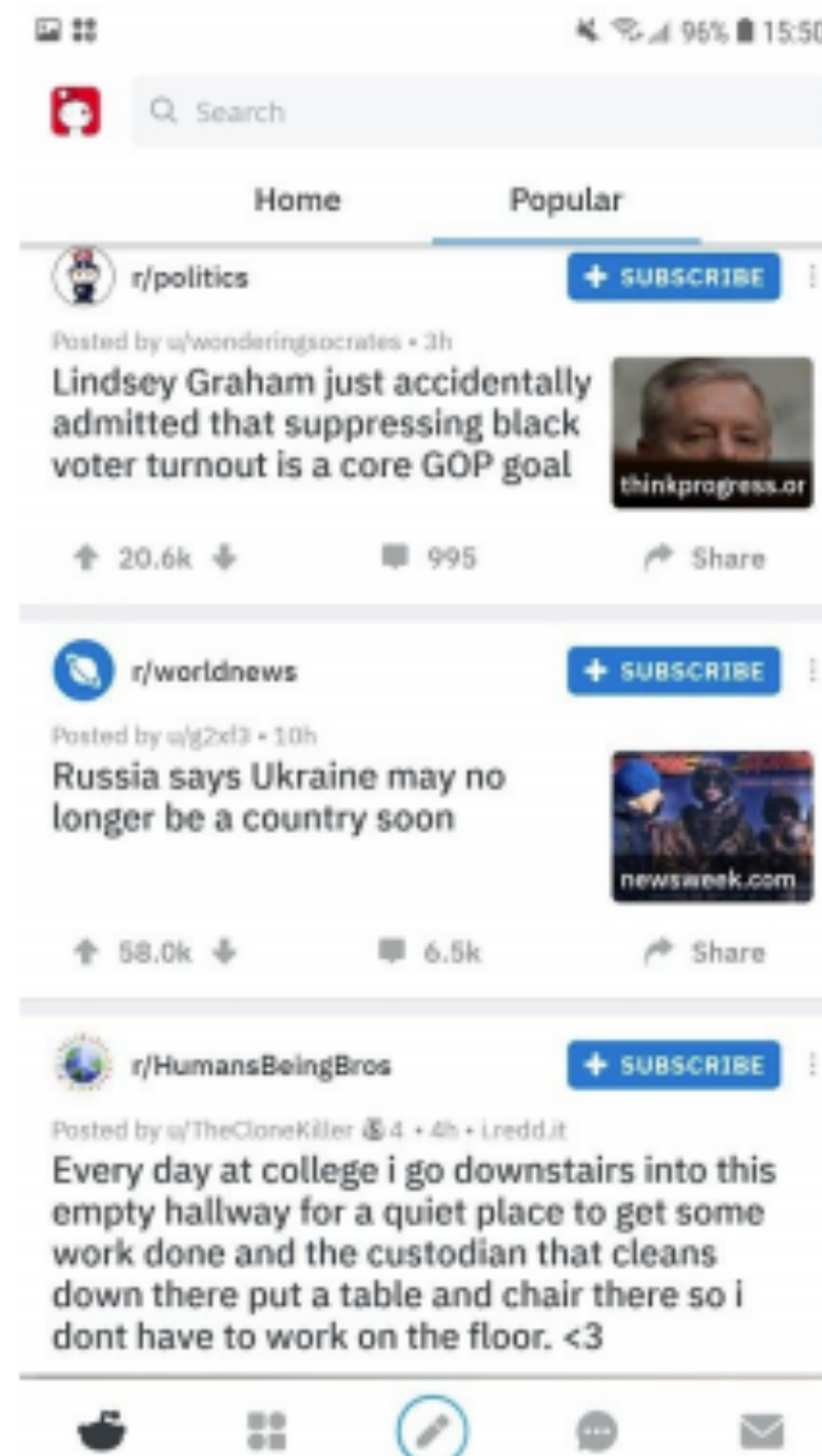


For my target user population (busy college students who do not follow news), Reddit is the best app so far. Learning about news is not overwhelming because the writing is in short segments. It does not require effort to use and find interesting content, and there's a great variety of content. Users can decide whether they are interested in seeing content that is personalized to them or content that is popular (determined by upvotes). It falls short however because users often can't remember information they read and the information isn't the most reliable for news. There are many reasons that a post could be upvoted (ex. Wholesome Funny, ironic), meaning the post does not have to be accurate or reliable to be Popular.

+   It's an app that is not overwhelming to use. All of the posts are typically short; you don't have to do any customization. The feed is determined for the user.
-   I wish that there was reinforcement to remember what the user reads. Because the user never sees the post again, they will likely forget what they read.

## 2) Feedly



### U.S. Soldiers Killed In ISIS Attack

Political Wire / by Taegan Goddard / 8h

"The Islamic State asserted responsibility Wednesday for a suicide blast in the U.S.-patrolled city of Manbij in Syria, the first such

+   Allows user to decide how much information they want to see about the topic.
-   I wish the app required less customization and effort from the user. A user can add the article to different "boards" (which the user has to make), save for later, share, like. This app

# Evan Barosay (Previous quarter)

| | simplicity | Calculation accuracy | Organizational | gratuity-inclusive | Availability | Shareable | Splits the bill | Payment method built in |
|---|---|---|---|---|---|---|---|---|
| Evan's Tool | | X | | X | | X | X | |
| TAB | X | X | X | X | | X | X | X |
| Paper Napkin | X | | | | X | | | |
| Venmo | | | | | X | X | | X |
| Excel | | X | X | | | | | |
| Calculator | | X | | | X | | | |

# from the Lab…
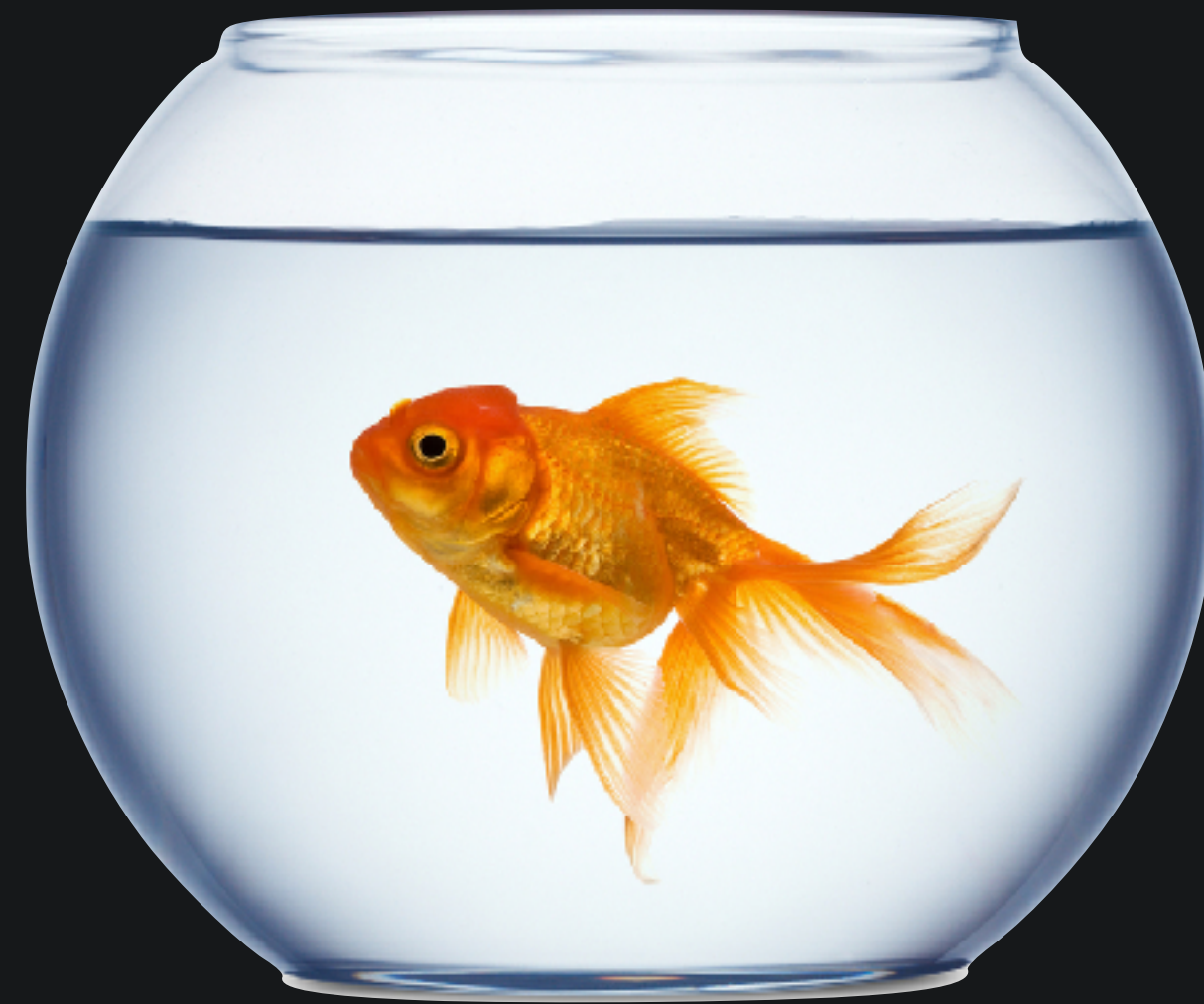
...to the Wild

An anomaly or a strategy?

The journey to 8 million users begins with a block of wood

In 2000, Palm sold nearly 8 million units and had a 76% share of the PDA market.

# Plywood Experience Sampling
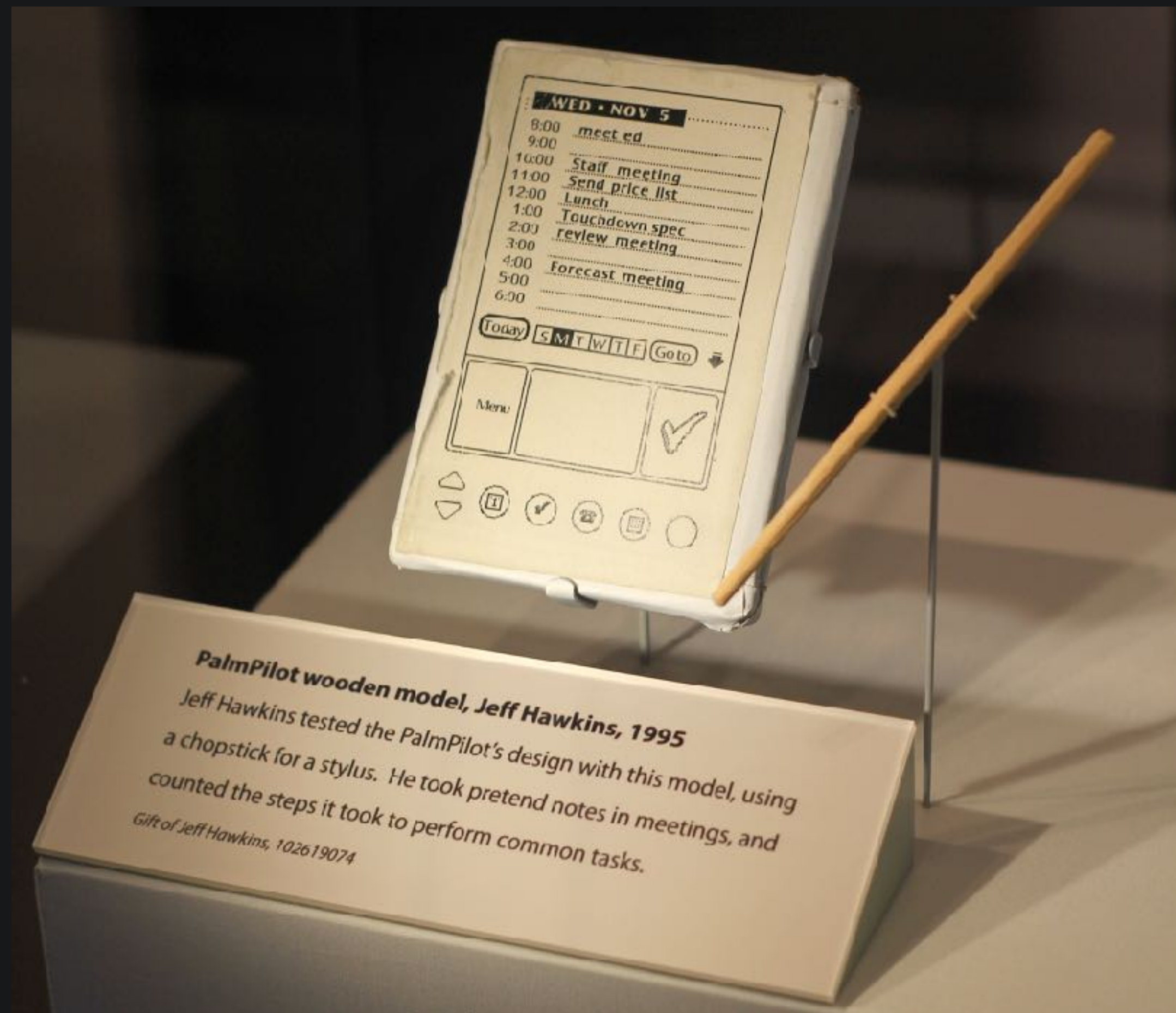


"If I wanted to check the calendar I'd take it out and press the wooden button."

-Jeff Hawkins

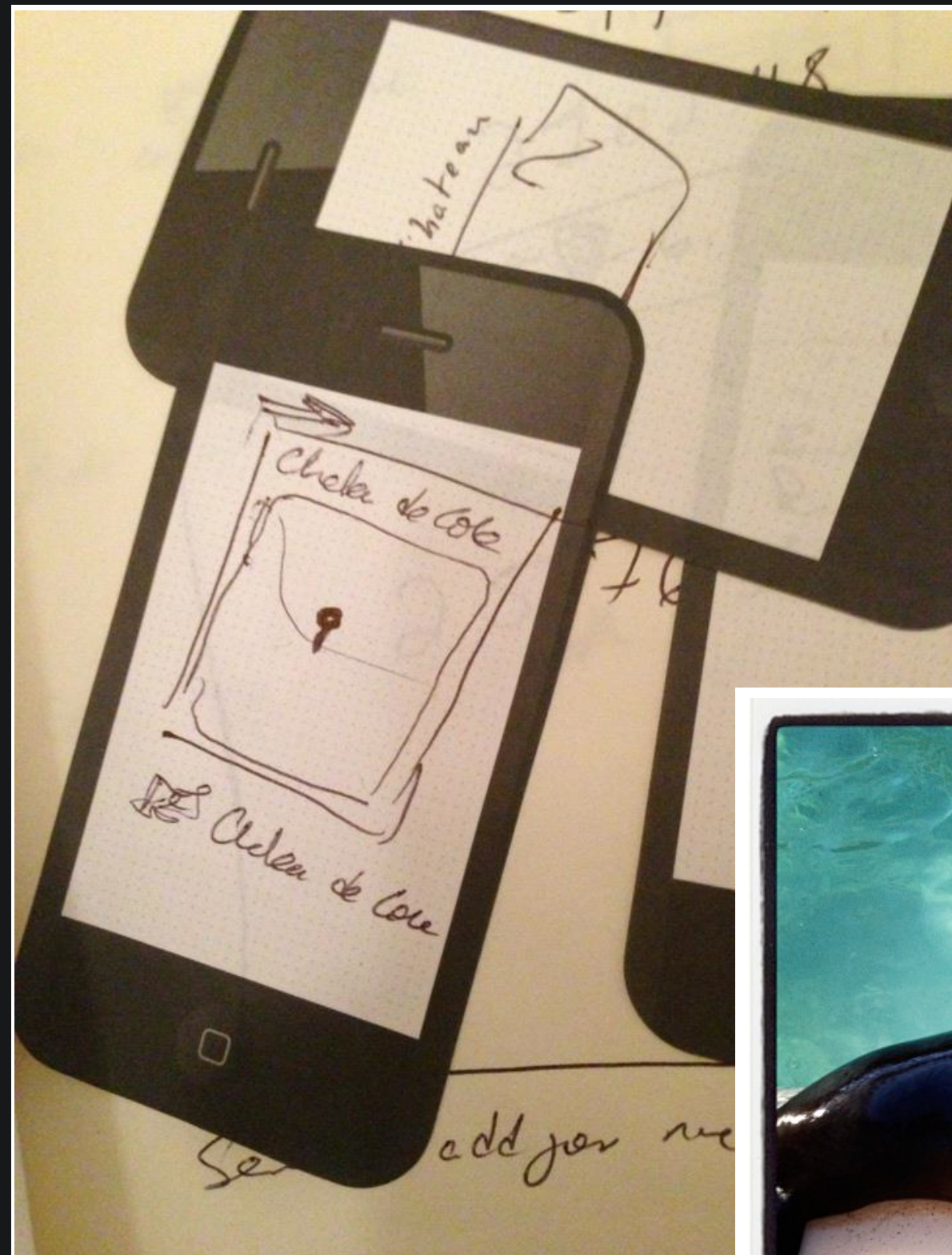Computer History Museum in Mountain View, CA courtesy of Michael Hicks's image on flickr

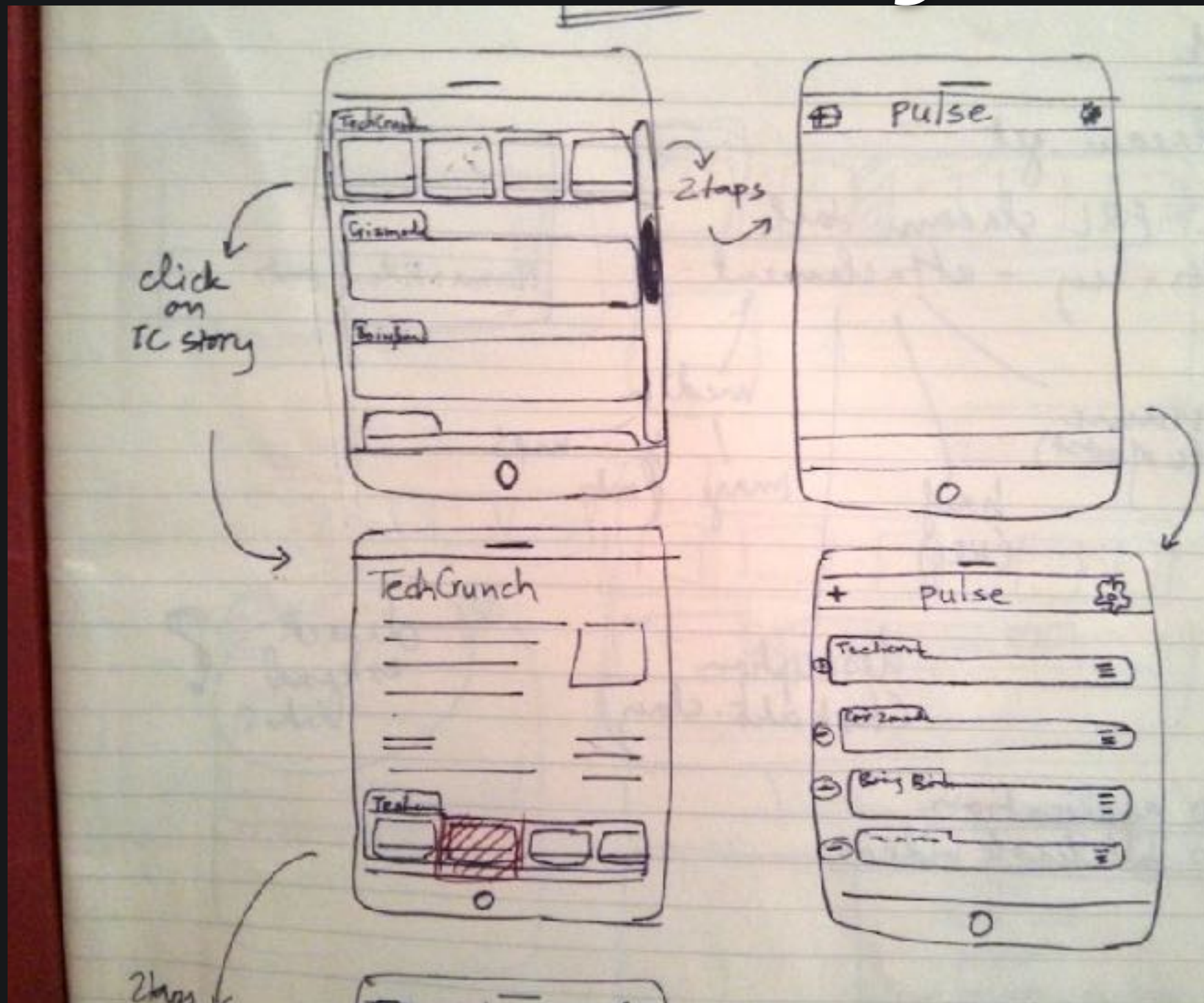# How do you 'sketch' a social computing environment? Mike's Burbn experience
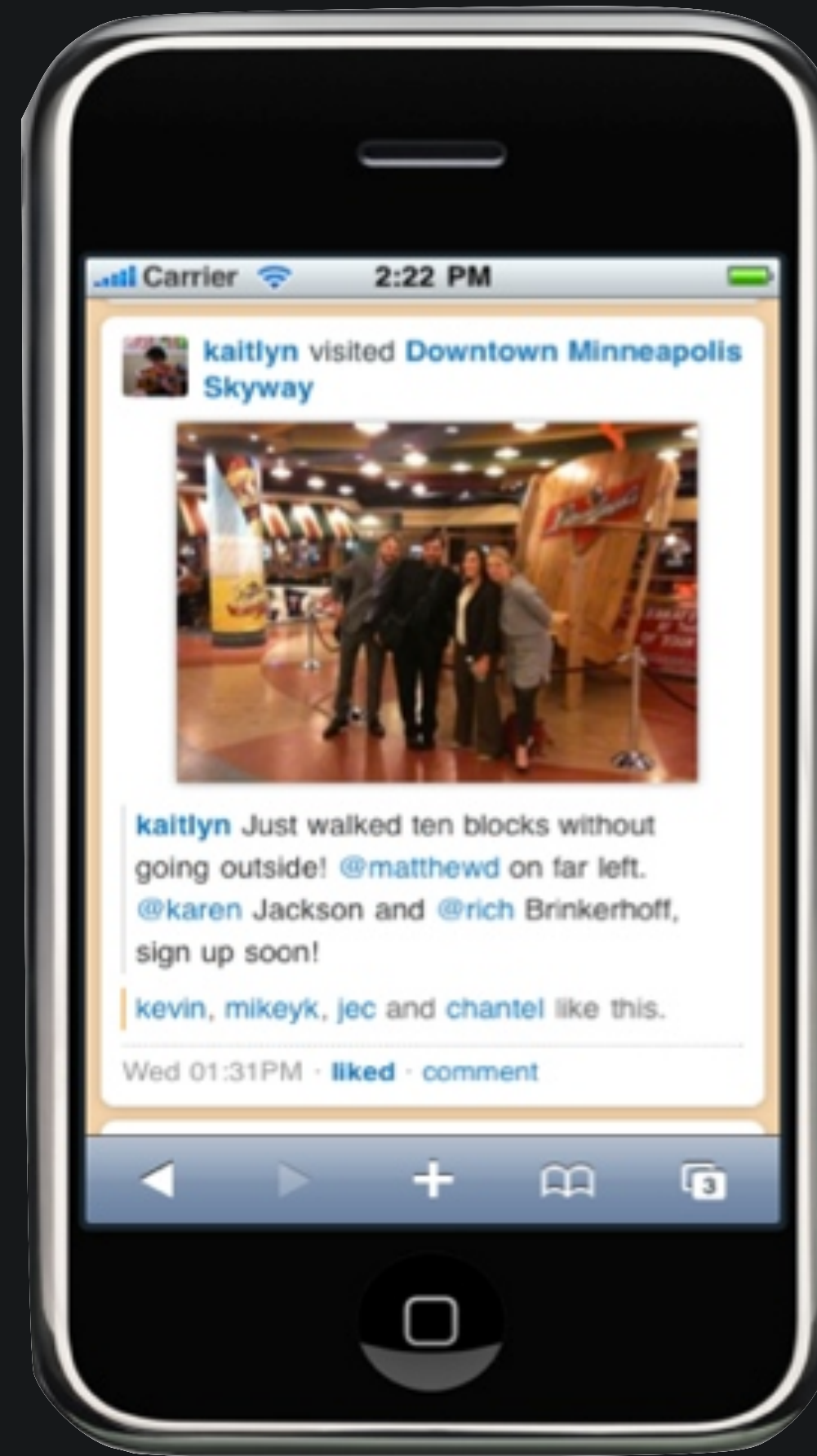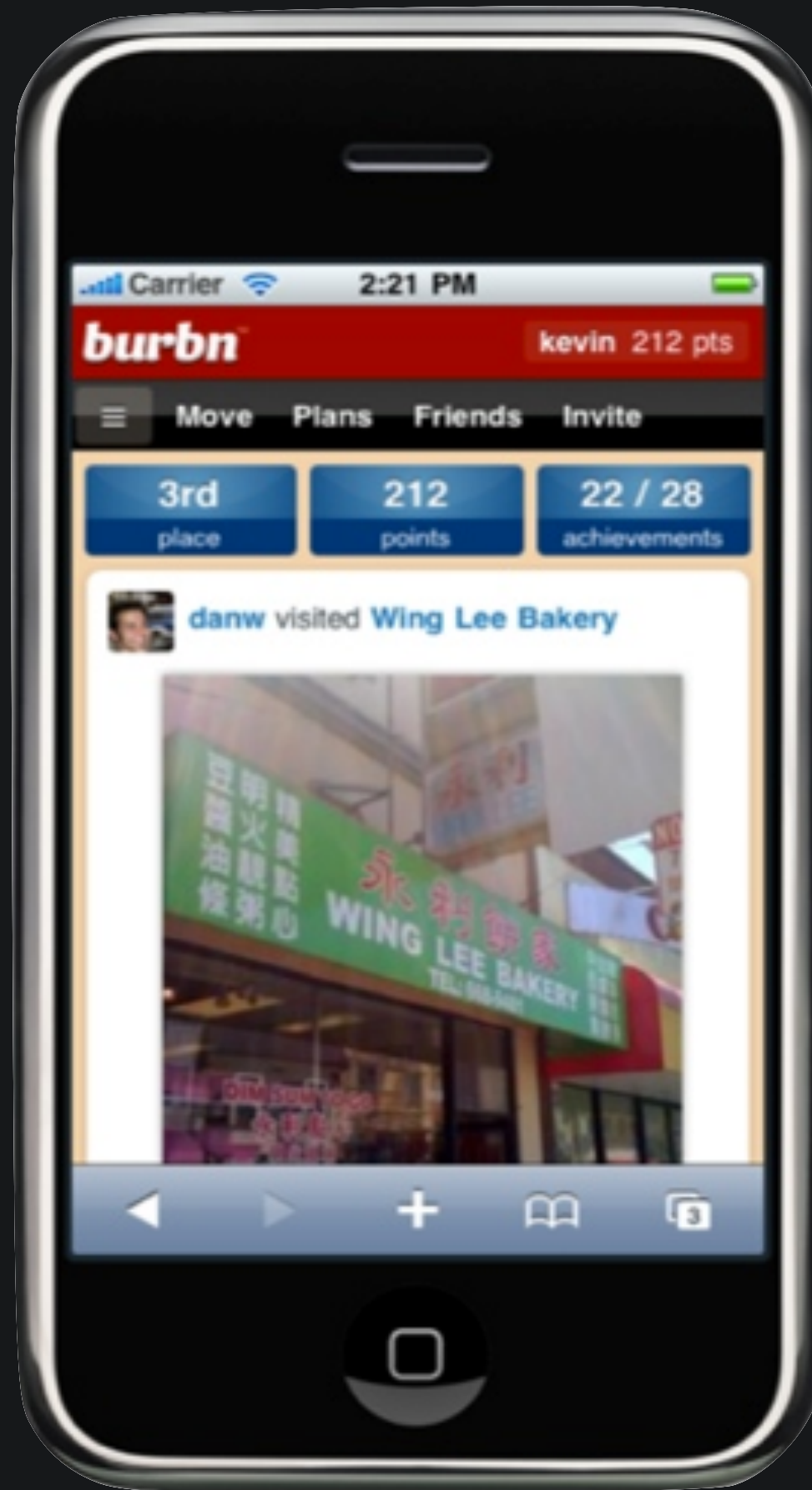
# If at first you don't succeed…
# From MVP to >400m active users

# An anomaly or a strategy?

SECTIONS    𝕿    HOME    🔍 SEARCH    The New York Times

# B!ts

## The iPad Pulse Reader Scales the Charts

By BRAD STONE    JUNE 1, 2010 6:10 PM    💬 16

## Starting Up with Design Thinking: The Story of LinkedIn's Pulse

| Home | Interviews | | Recent | Popular | Random |

*We met Akshay Kothari, one of the two co-founders of Pulse, a business reader app that was famously displayed by Steve Jobs at the Apple Worldwide Developers Conference in 2010 and was later acquired by LinkedIn for 90 Million Dollars. Akshay and his business partner Ankit*
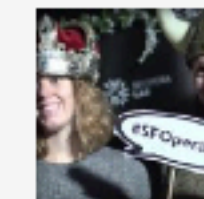
**Comfortable with Feeling Uncomfortable: Innovation at the San Francisco Opera**
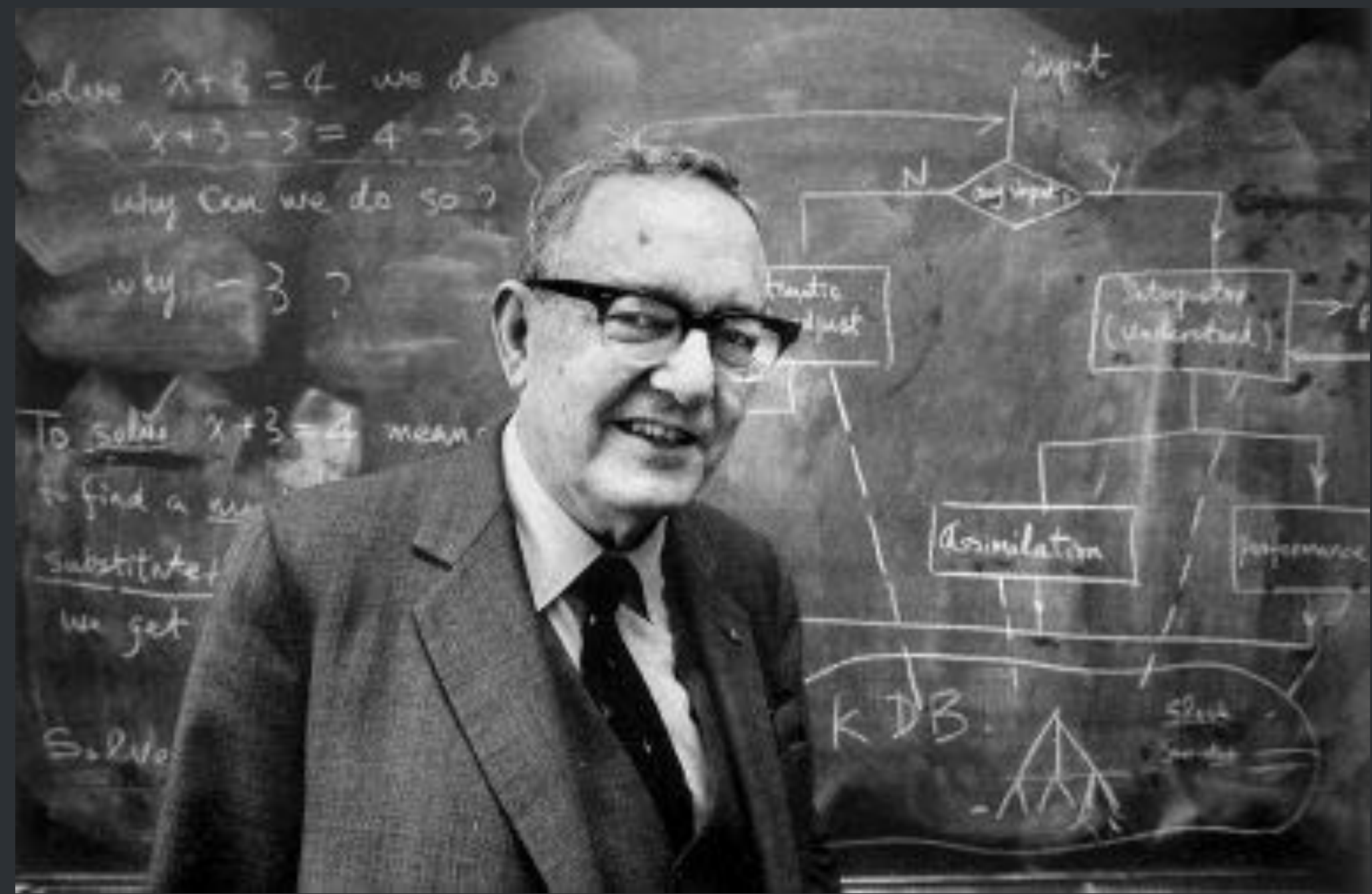
Sep 20 2016

Pittsfield in the near Future

Prototypes are postcards from the future

"Everyone designs who devises courses of action aimed at changing existing situations into preferred ones."

— Herb Simon

# Prototyping in real life



James Landay the prototype furnitur Johan Lundin Cooking and raising children is constant prototyping of methods

Almost everything I do that i haven't done before involves prototyping. Just a few examples: It took me three revisions to make a Lego stand for my mobile phone. (2) Driving home from a local high-school during rush hour required multiple trials to figure out which alternative route to use under various conditions. (3) Cooking a brand of pasta I haven't cooked before took several trial before I got it the way I liked it. (4) Writing a web post always takes me more drafts than I plan for.
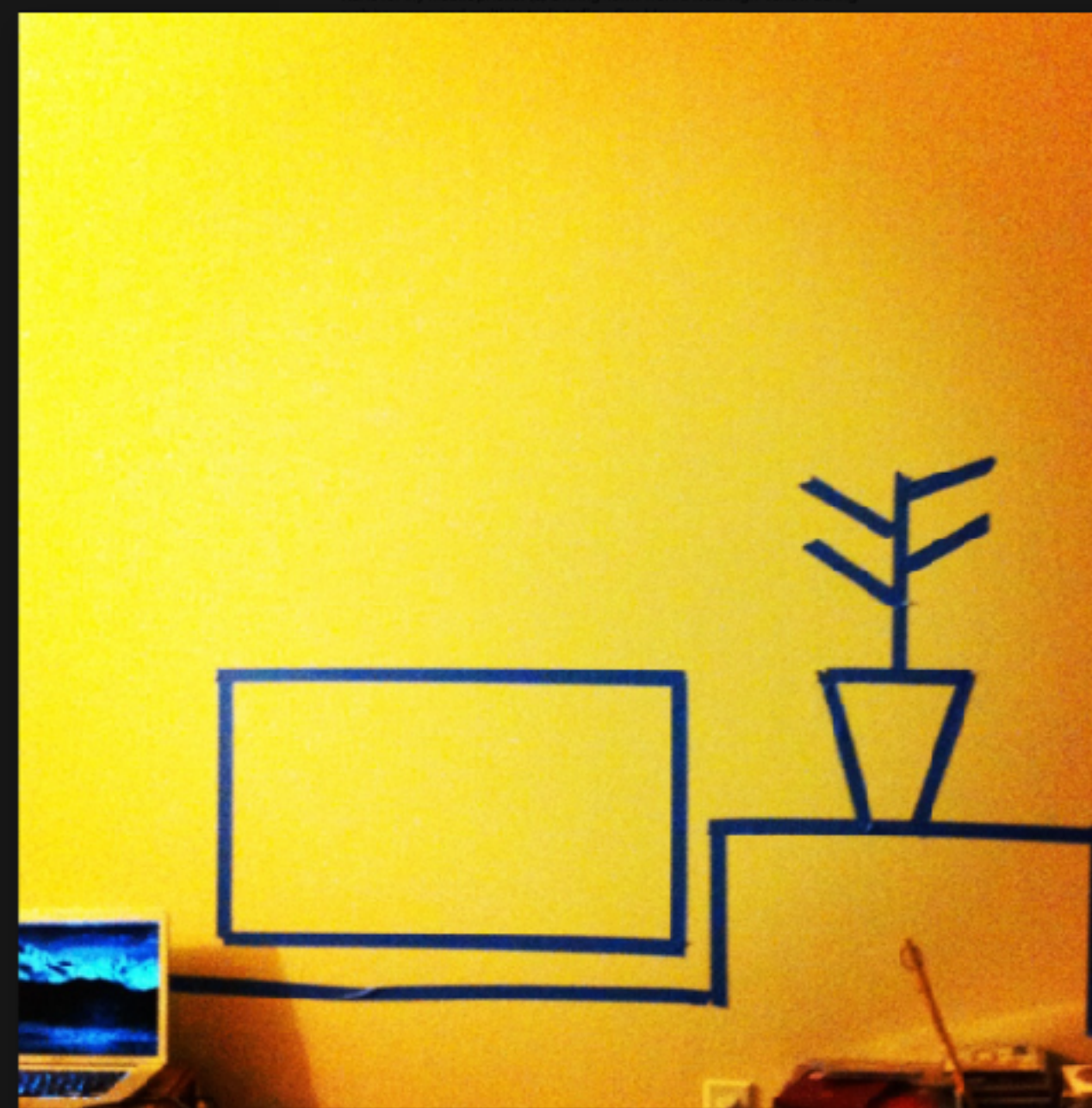
prototyping entertainment center with painter's tape in our old apartment. plant included for full effect. this was the winning constellation! happy to send full size (1142x1142) if FB compresses, just let me know.
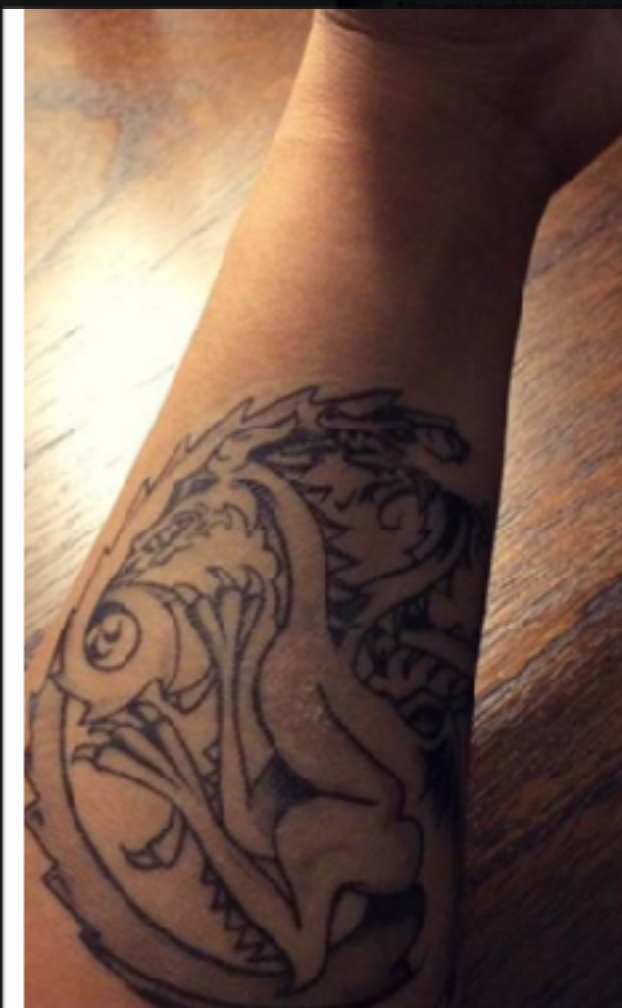
When I remodeled my kitchen, before I started teardown and building I wanted to make sure my design would work. So hearkening to my model airplane days, I built a balsa wood model. It was absolutely necessary. My design involved a complicated roof line and my drawings did not reveal the subtle interaction between wall height, roof pitch, and skylight positioning.

I'm doing long form prototyping. I try a different custom temporary tattoo every other month with the goal of choosing a design and location in a few years for a real one.

Maryanna Rogers Contracting as a prototype for working at a company full time

Maryanna Rogers Prototyped living with my man for 3 months (in Berlin) before moving in together 🙂

Joined Big Sisters to prototype parenthood.

Meenal Lele oh and I ikea hacked a standing desk. which taught me that i like sitting

# Participants picked their concept early



"This stuff will take a while... I'm just going to try to make it possible"... I don't see any other way."

Design melds physical, digital, and social worlds

A
atoms

B
bits

C
culture

# Beyond Being There

# What is Design at Large? Three principles

- Traditional design makes things: teacups and brochures. With Design at Large, the thing is only a piece of the experience
- With traditional design, we don't know what happens when it leaves the factory. With Design at Large, we do.
- With traditional design, the object stays the same forever. Design at Large is magic, creating always evolving prototypes.

- Because solutions live in the real-world,
  **Start with observation (define your system)**
- Because what people say is different than what people do,
  **Use that observation to uncover/articulate the <u>real</u> problem**
- Because no one person has all the knowledge,
  **Engage diverse stakeholders (all the people)**
- Because the first idea is rarely the best,
  **Encourage wild ideas: brainstorm widely w/multidisciplinary teams**
- Because there's no oracle for complex systems and solutions emerge from surprising places,
  **Get real quick, test and iterate**
- Because designs change the setting,
  **Prototype fast and furious, trying ideas in real situations**
- Because what we see depends on what we know,
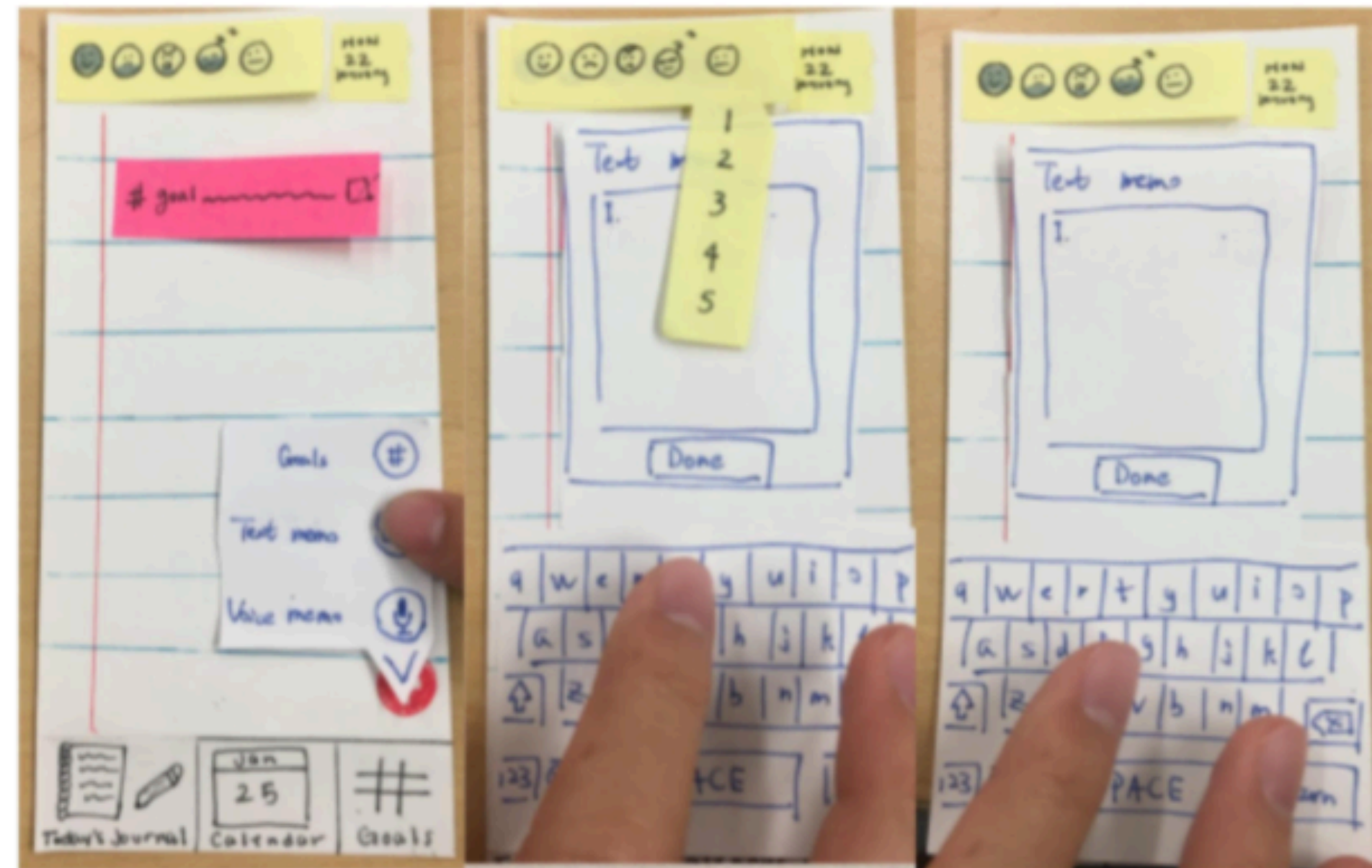  **Embrace Practice based evidence & Evidence based practice**

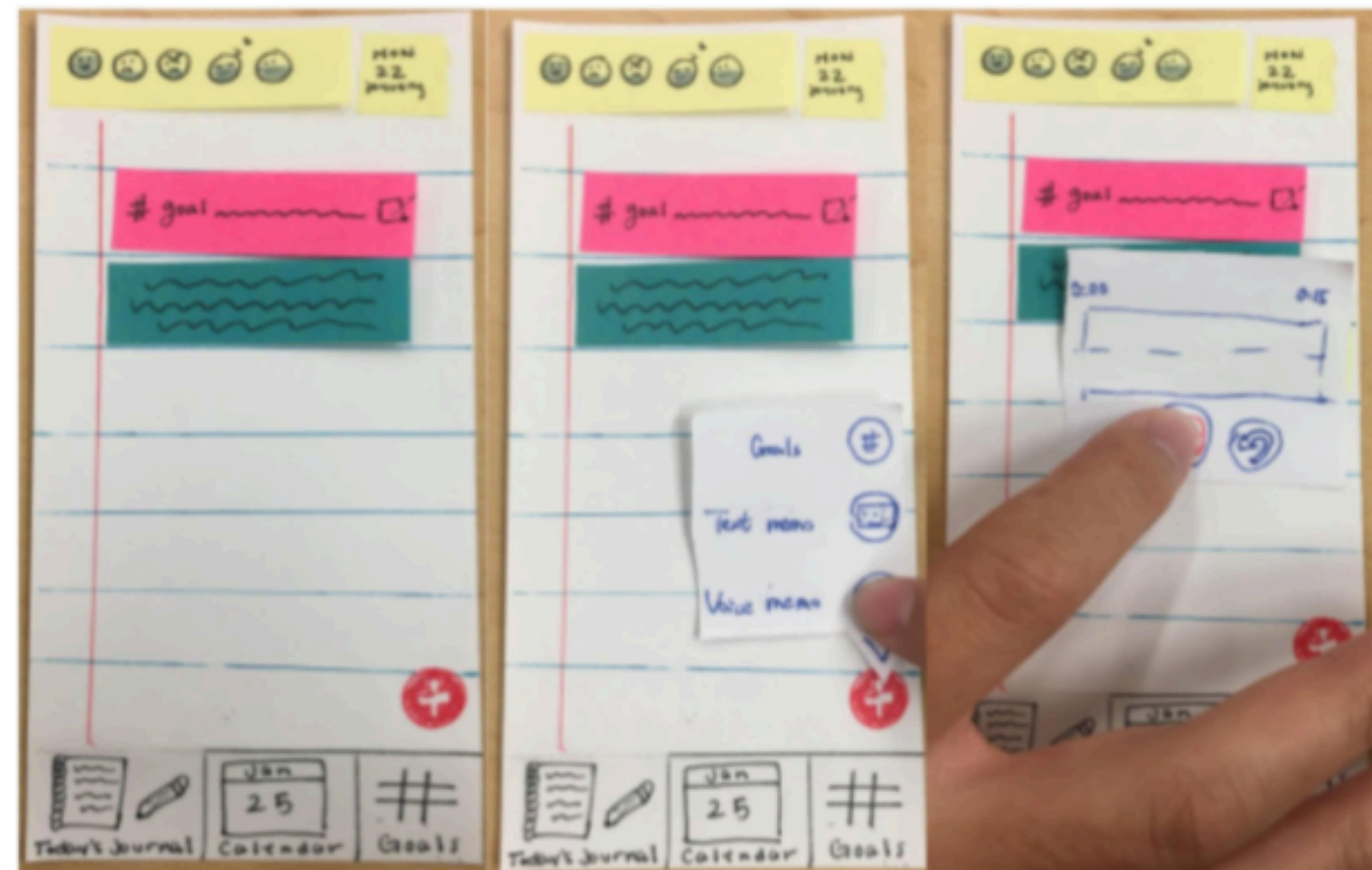# A3 Storyboard: Jeremy Borja, Jayne Chong, Sally U
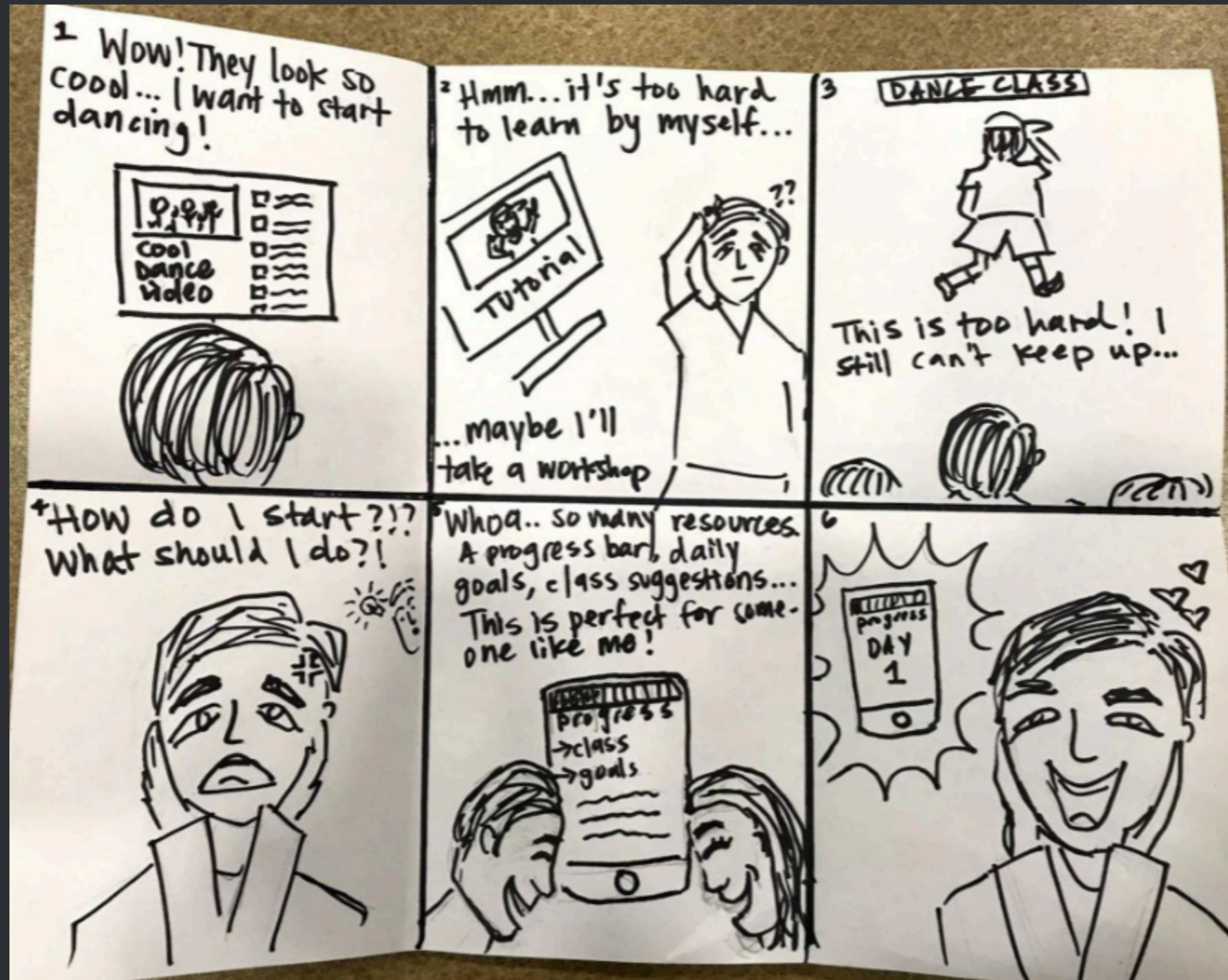
# A3 Prototype: Zehua Chen, Vanessa Wong, Nessa Vu



Step 3: Add a Text Memo & assess your emotions again (emoticons will now display an average of the 2 assessments)

Step 4: Record & add a Voice Memo

drawing star
people

# Ten Design Heuristics

### UNDERSTANDING

Consistency

Use Familiar Metaphors & Language

Clean & Functional Design

### ACTION

Freedom

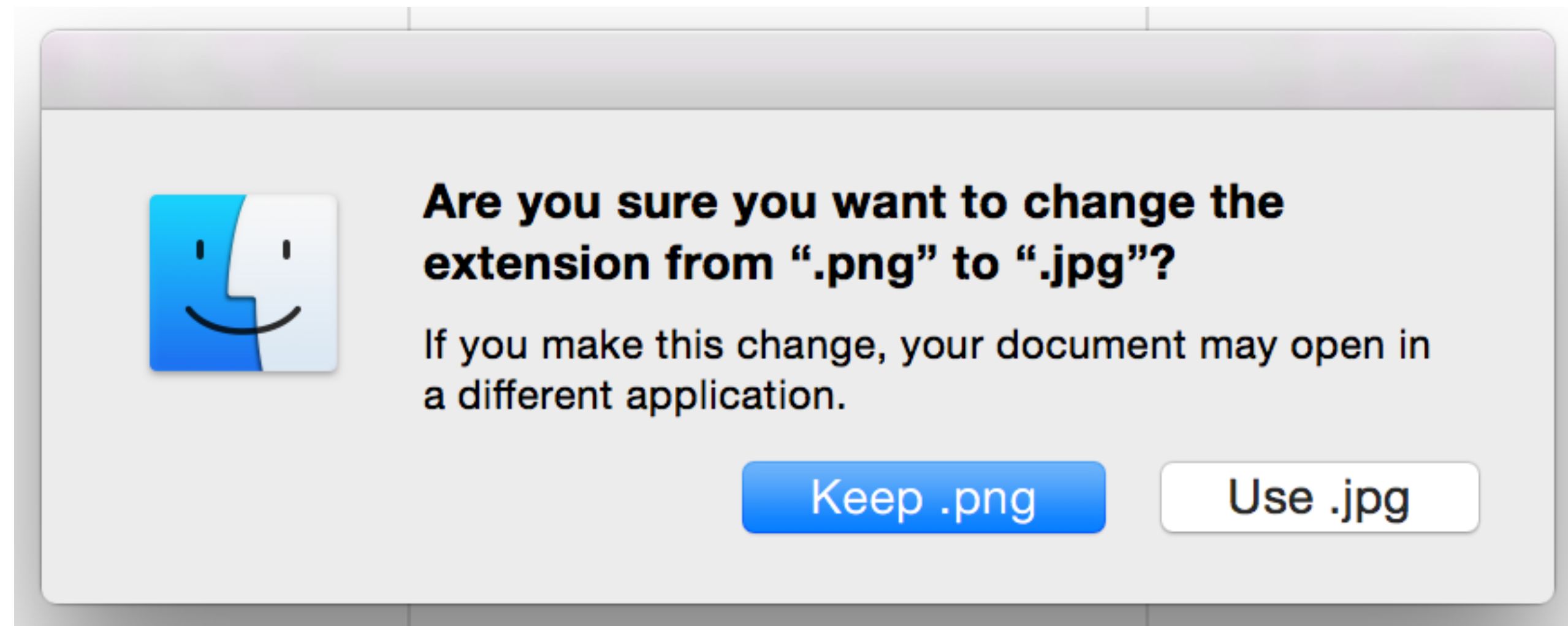Flexibility

Recognition Over Recall

### FEEDBACK

Show Status
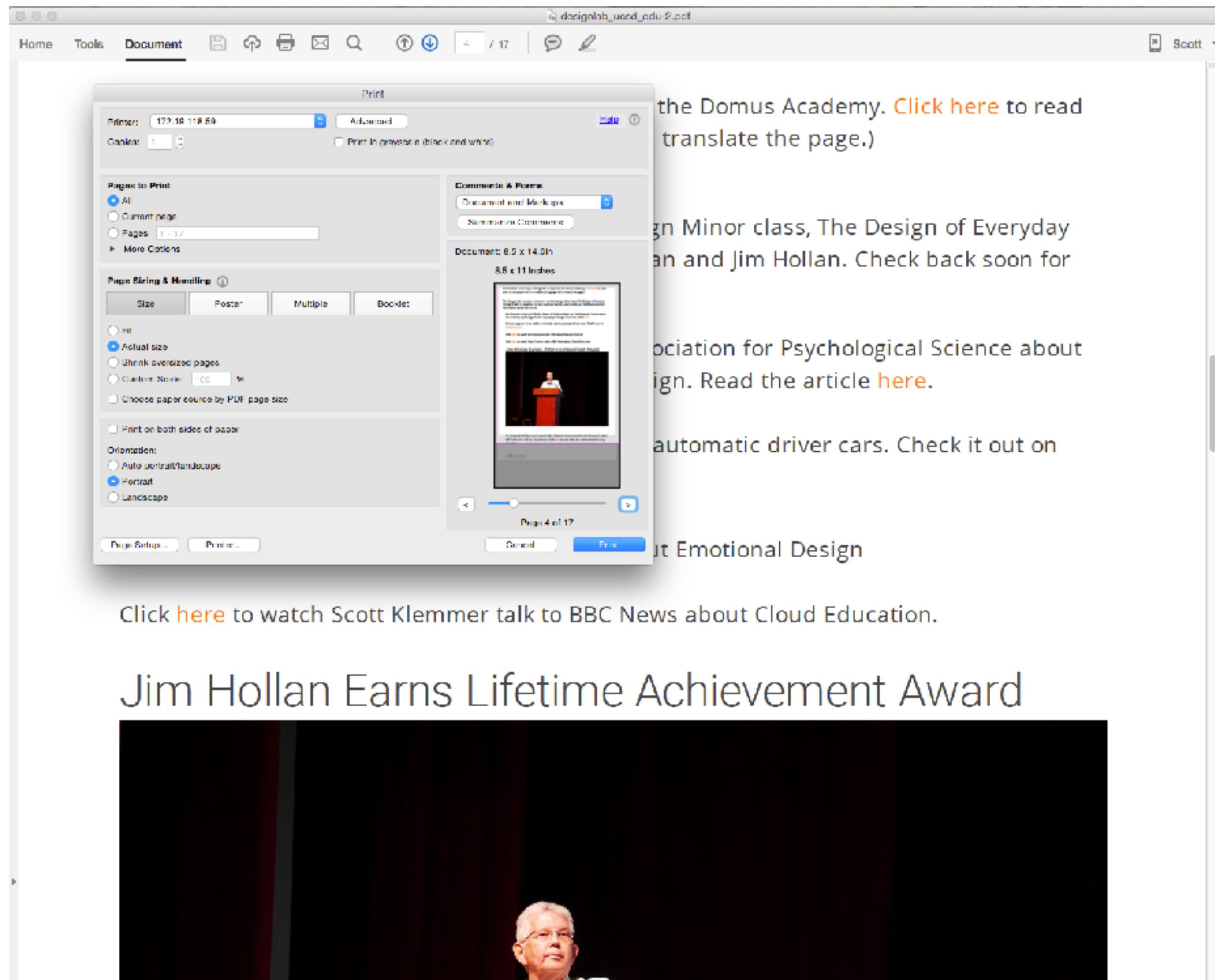
Prevent Errors

Support Error Recovery

Provide Help

My somewhat revised names for Jacob Nielsen's heuristics: http://www.nngroup.com/articles/ten-usability-heuristics/

# Clearer choices
## Consistency

Apple Mac OS X Finder

# Metaphors
## Familiar metaphors & language

Adobe Acrobat
2015

Desktop

Folder

Cart

**Metaphors**
**Familiar metaphors & language**

Images courtesy of SAP

to be
continued...