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BRAINSTORMING & TEAMWORK

CSE 440

University of Washington

JAN 13 - WEEK 2 - TUESDAY

When are assignments due?

4:00am on the day of class/section

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Late policy: Random (submissions will be downloaded b/w 4:00-8:00am)

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exceptions: completed during class/section

Today

- Brainstorming +
- Teamwork =
- Team brainstorming
  - Assignment 2a: Project ideation

Brainstorming

Reading posted on webpage

7

secrets to good brainstorming

1. Sharpen the focus.
2. Write playful rules.
3. Number your ideas.
4. Build and jump.
5. Make the space remember.
6. Stretch your mental muscles.
7. Get physical.

Brainstorming

7

secrets to good brainstorming

1. Sharpen the focus.

"spill-proof coffee cup lids" *too narrow*

"bicycle cup holders" *too dry and product focused*

"helping bike customers to drink coffee without spilling or burning their tongues" *good*

Tom Kelley from IDEO

Brainstorming

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2. Write playful rules.

Don't start to critique or debate
Go for quantity *100 ideas/hour*
Encourage wild ideas
Be visual

Tom Kelley from IDEO

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3. Number your ideas.

Keeps you on track
Easy to jump back and resume

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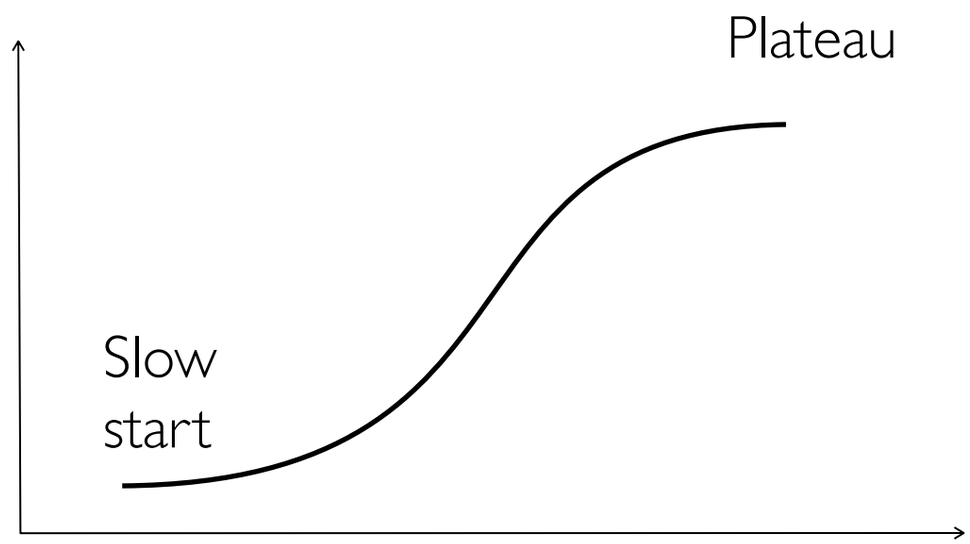
4. Build and jump.

build: what are other ideas?

jump: let's switch gears



Power curve

Tom Kelley from IDEO

Brainstorming

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5. The space remembers

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6. Stretch your mental muscles.

warm up before starting

Background reading + expert lecture

Go to a toy store *<-- outperformed*

Do nothing

Tom Kelley from IDEO

Brainstorming

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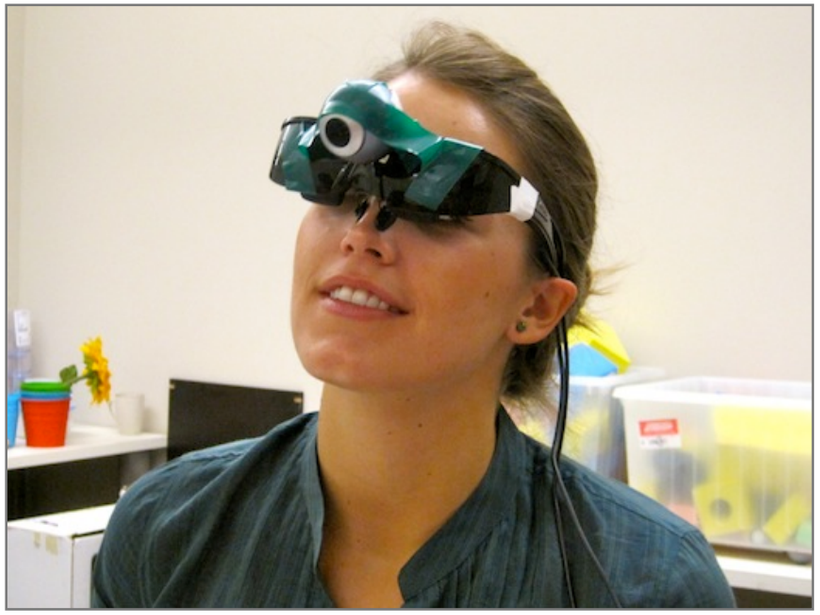
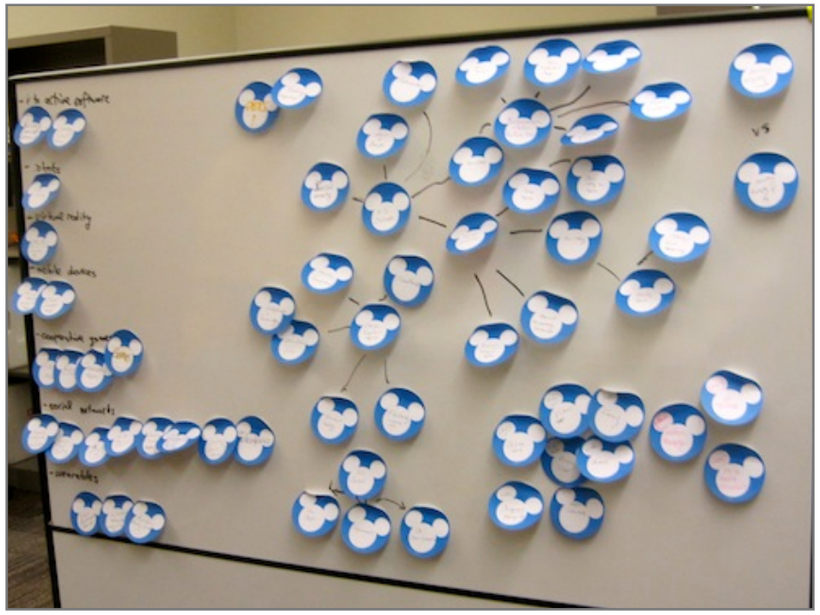
7. Get physical.

3D materials
Bodystorming

Tom Kelley from IDEO

Brainstorming





here's how we brainstormed google glass back when it didn't exist :)

Brainstorming

6

ways to kill a brainstormer

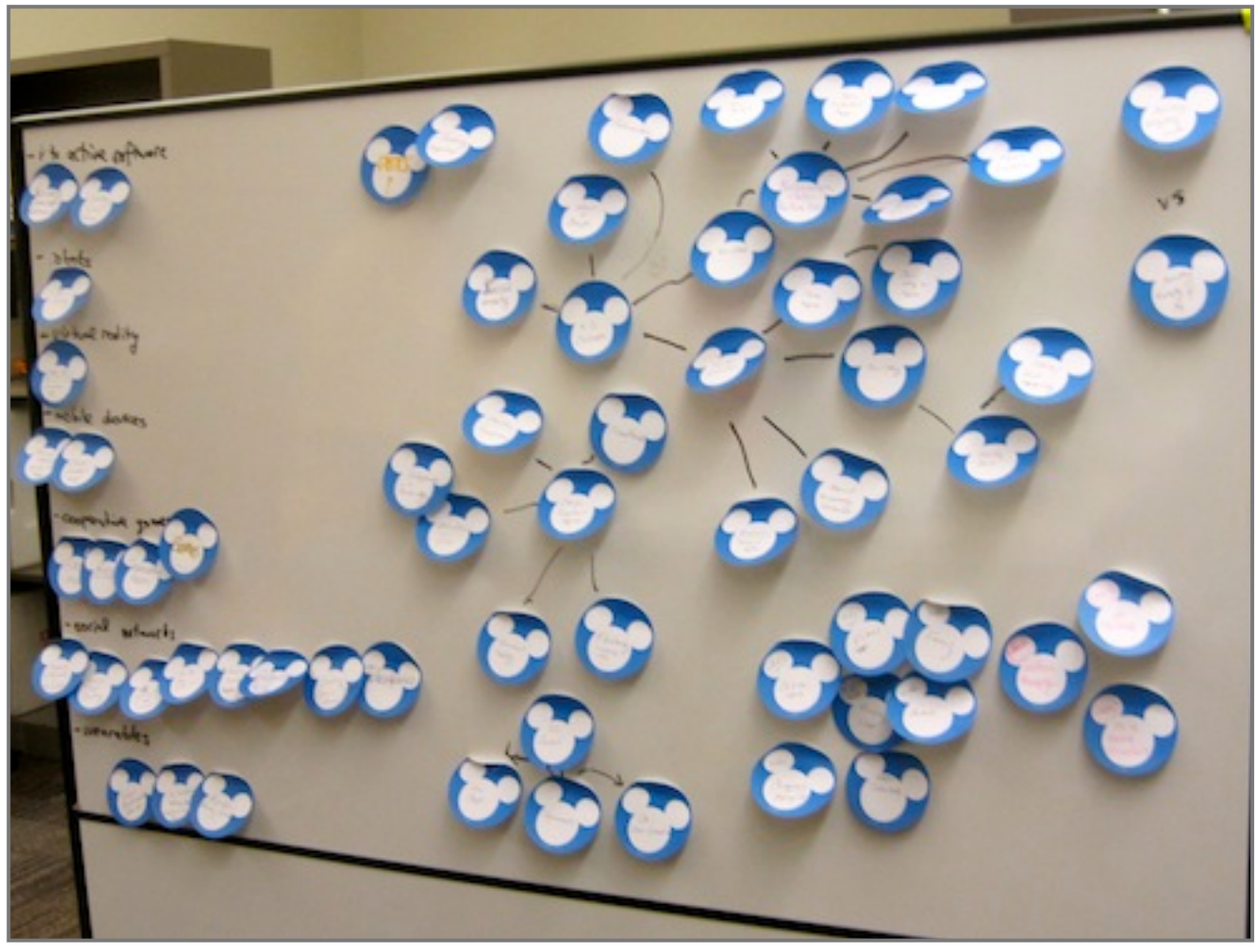
1. The boss gets to speak first.
2. Everybody gets a turn.
3. Experts only please.
4. Do it off-site.
5. No silly stuff.
6. Write down everything

Organizing data/ideas

- Affinity diagrams
  - Step 1: Put bite-size observation/idea on a card or post-it
  - Step 2: Place related observation/idea close together, indicate relationships
  - Step 3: Discover clusters and categorize all observation/ideas in a cluster (sometimes useful to have misc cluster)

Organizing data/ideas

Discover relationships and groups



After affinity diagraming

Interactive Software
- Video Blogging, record yourself (Social Mirror), augment, improv
- Role play virtual practice

Robots
- Turn-taking
- Pets- responsibility, Pairo, social isolation

Virtual Reality
- CAVE- interactive VR

Mobile Devices
- Mood Identifier Mobile App
- Cheat Sheet App

Cooperative Games
- SIMS like
- Role-play
- Cooperative teams

Social Networks
- Forums- tips, chatting
- Connecting to all AS- share
- How do they interact?
- AS adult/AS kid tutoring- creation and receiving social stories
- Teaching expertise
- Producing social stories
- Parents of AS kids connected to AS adults
- Teleconference
- Video blogging

Where
- Within therapy
- At home
- In a social situation

Who
- Virtual
- Family
- Online Users
- Caregivers/therapists
- Support network
- Primary user
- Actors

Requirements
- In control
- Low cost
- On own schedule
- Motivation

Wearables
- Physiological monitoring system
- Self-awareness monitor
- Wearables communicate to phone
- Earpieces
- Recording real interactions for reflection, practice, therapist feedback
- Wearable camera-hat, glasses, undercover cop style

Assisting everyday life **versus** assisting therapy?

Design Considerations
- Feedback
- Realistic
- Transferable
- Adeptness in technology
- Motivational
- Fun
- Emotional safety
- Flexibility in both interests and skills
- Effective
- Contributions to society
- rewarding
- Focus on adults
- Build on strengths

AS Challenges
- Social anxiety
- Afraid of change
- Perfectionist
- Non-verbal

Recognition versus production
- Eye contact
- Voice inflection and tone
- Gestures
- Facial expressions
- Body movements and postures

- Social interaction

Conversation topics
- Stay on topic

Turn taking
- Starting conversations
- Ending conversations

Awkward, embarrassing statements

Proxemics, personal space

Top Ideas

1. **Producing Social Stories**
   - Producing rather than watching
   - Match with children, inherent reward
2. **Mobile/Wearable**
   - "wrap it up"
   - Mood, cheat sheet
3. **Games**
   - Cooperative
   - Role-play

Teamwork

- Teams are different from groups
- There is a place for groups

Working groups are both prevalent and effective in large organizations where *individual accountability* is most important. The best working groups come together to:

- share information, perspectives, and insights
- make decisions that help each person do his or her job better
- reinforce individual performance standards.

Teamwork

- Teams are different from groups
- There is a place for groups

Teams require both individual and mutual accountability. Teams rely on more than group discussion, debate, and decision; on more than sharing information and best practice performance standards. Teams produce discrete work-products through the joint contributions of their members. This is what makes possible performance levels greater than the sum of all the individual bests of team members.

Teamwork

Groups

- strong leader
- individual accountability
- organizational purpose
- individual work products
- efficient meetings
- measures performance by influence on others
- delegates work

Teams

- shared leadership
- individual & mutual accountability
- specific team purpose
- collective work products
- open-ended meetings
- measures performance from work products
- does real work together

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- Common commitment
  - requires a purpose in which team members believe
- Specific performance goals
  - comes directly from the common purpose
  - helps maintain focus – start w/ something achievable

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- A right mix of skills
  - technical/functional expertise (programming/design/writing)
  - problem-solving & decision-making skills
  - interpersonal skills

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- Agreement and mutual accountability
  - who will do particular jobs, when to meet & work, schedules

Working as a team

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- Too many projects are done in groups
  - Drawing boundaries between code responsibilities

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  - You can split up, but you have to come back together
  - Use complementary skills, be mutually accountable

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- Too many projects are done in groups
  - Drawing boundaries between code responsibilities
- This class requires you to work as teams
  - You can split up, but you have to come back together
  - Use complementary skills, be mutually accountable
- The "real world" requires this too

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  - responsible for seeing work is organized and done
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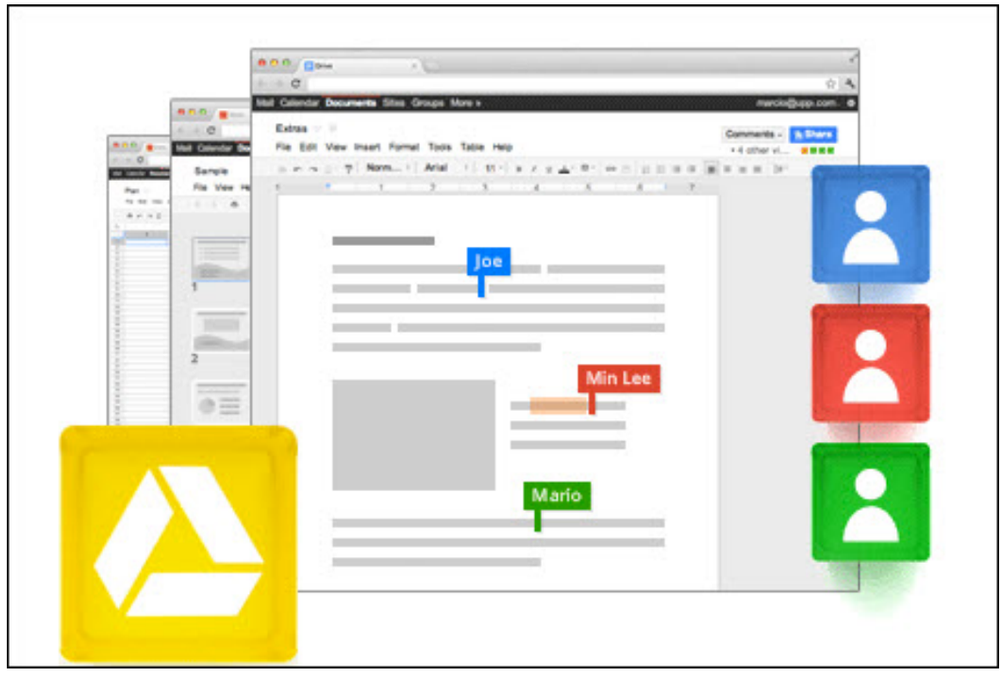
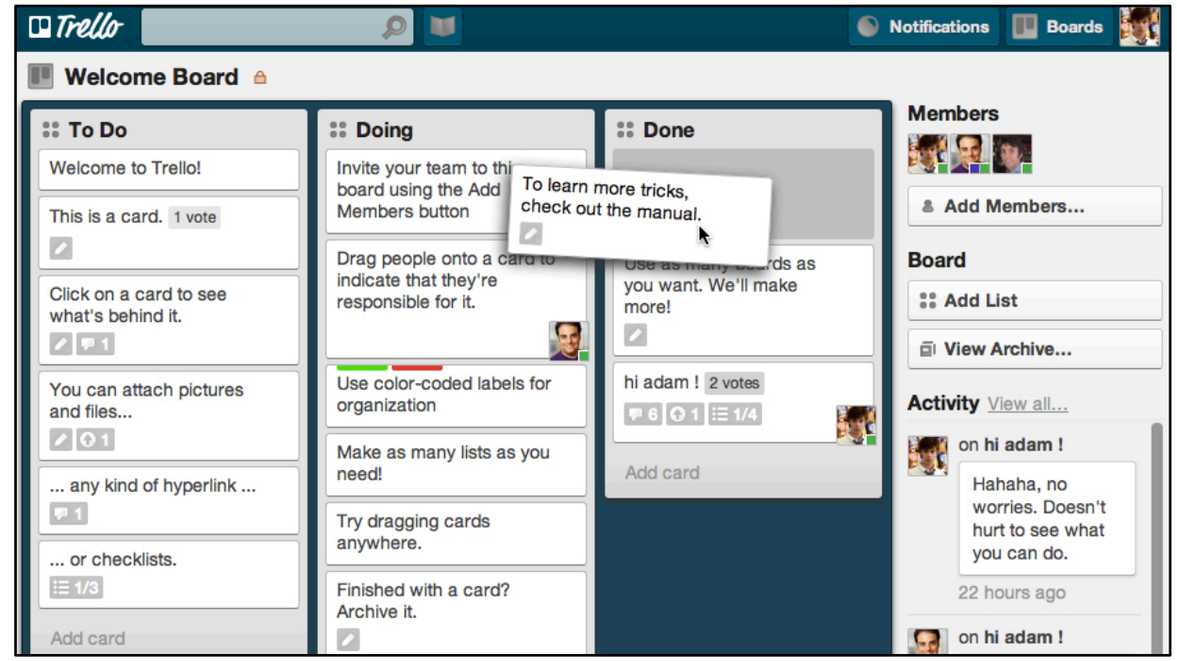
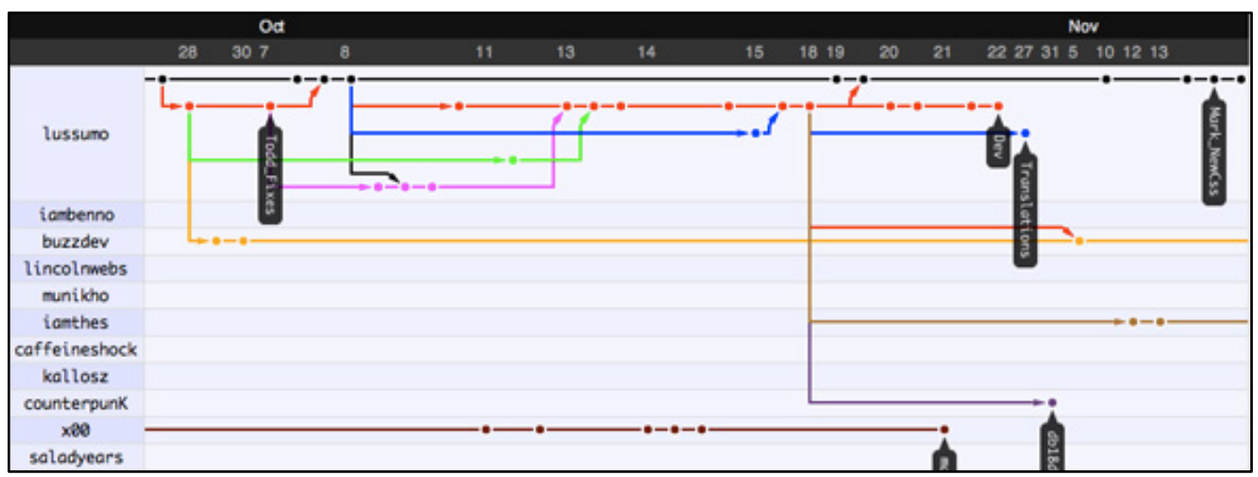
- Assign each person a role
  - responsible for seeing work is organized and done
  - not responsible for doing it themselves
- Names/roles listed on major reports
  - Group Manager (coordinate team)
  - Documentation (coordinate writing)
  - Design (coordinate visual/interaction design)
  - Fieldwork and Testing (coordinate fieldwork and testing)

Collaboration tools







Team assignments

- We did our best!

Assignment 2a: Project Ideation

- 64 ideas about your project
  - specific problems and needs that a person might have in the context of your larger problem
  - tasks: what a person might accomplish in this context
  - features: a capability a design might have
  - interactions: how a feature might work

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starts now!