

Social Computing Systems

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Logistics

- Any course enrollment issues?
- Grades for quizzes will now be posted
- **Reading (1/23):** Beyond Being There
- Remember: participation notes
 - Feedback starting soon...

Logistics

- This Friday Assignment: Eval Method for group projects
 - Before then: I'll get you feedback on your ideas
- Next Friday: Individual Assignment #1 — code project in MeteorJS
- Next project step: “Pitch Presentation”!
- Anything else?

Today

- System design principles
- Evaluation methods
- [Example in teams]

Why???

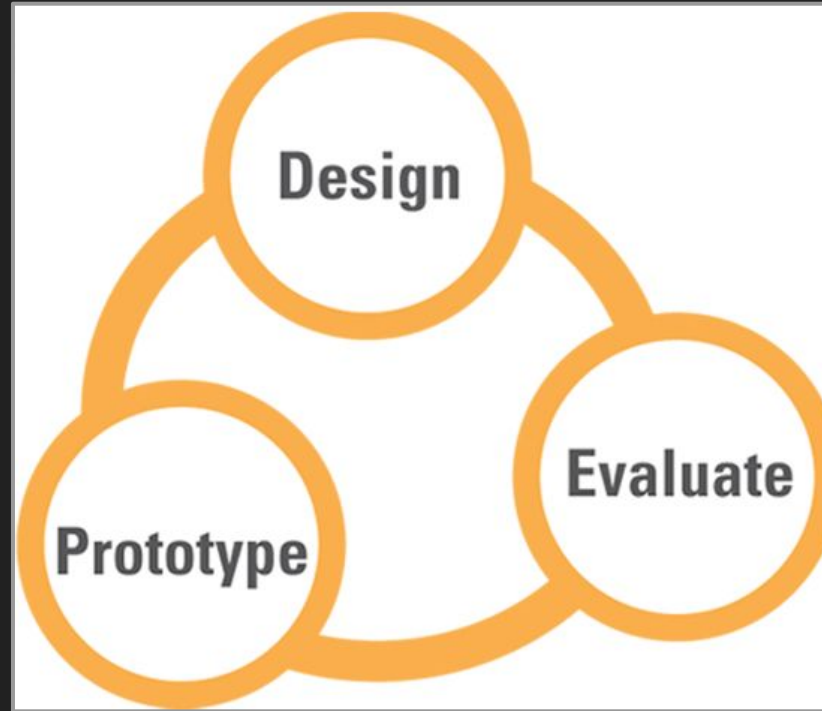
Building without design is aimless wandering

The design process can help guide good design

We want to build useful things

Designing Real Systems

System Design



Design Phases

Planning/Scoping

Exploration

Prototyping

Evaluation

Deployment

Motivation and Initial Design (Scope/Explore)

- Study the context of the problem, and how a solution would fit
- Discover + articulate a problem
- List stakeholders / needs / constraints
- Consider what tech is available and feasible
- Decide what to do first



Exploratory Analysis

Artifact analysis

Observation

- Who?
- Relationships?
- Actions?
- Context?
- Setting?

Contextual Inquiry

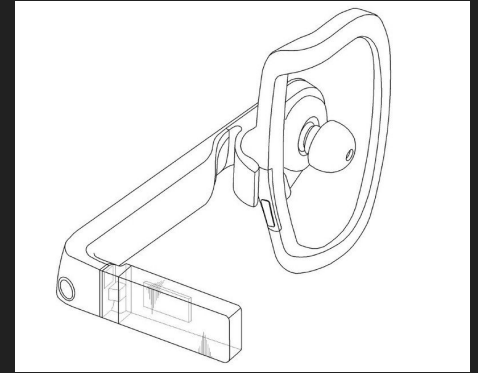
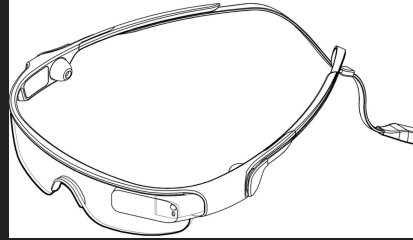
Prototyping

- Start with a low-fidelity model
- Iterate
- Test with 'example' users
 - e.g., within-team tests, hypothetical user profiles, etc.
- Iterate
- Test with real users
- Iterate
- More iterating
- Keep iterating...



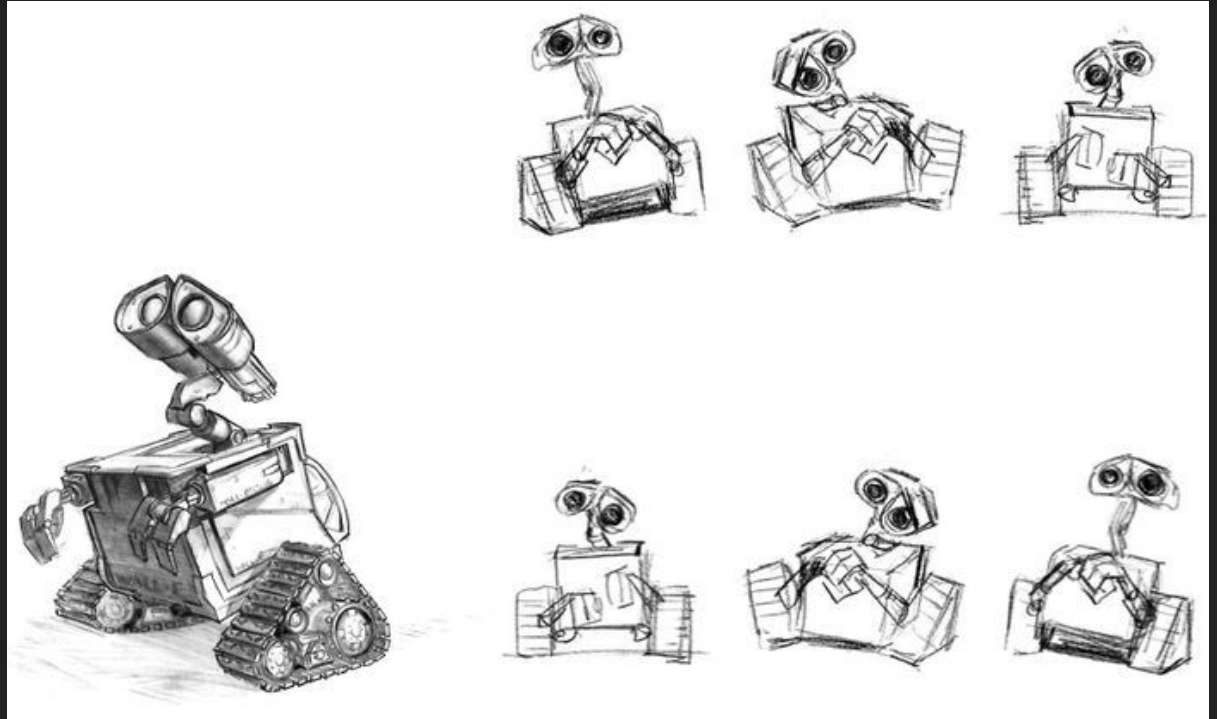
Types of Prototypes

- Sketches
- Paper prototypes
- Physical mock-ups
- 'Workbench' build
- One-off production
- Small-batch production
- Release-ready



What Should a Prototype Be?

- Quick
- Cheap
- Explanatory
- **Better than nothing**



Prototyping Example: Google Glass



Thousands of dollars + months of effort



Millions of dollars + years of effort

How Not to Prototype

How to draw an Owl.

"A fun and creative guide for beginners"

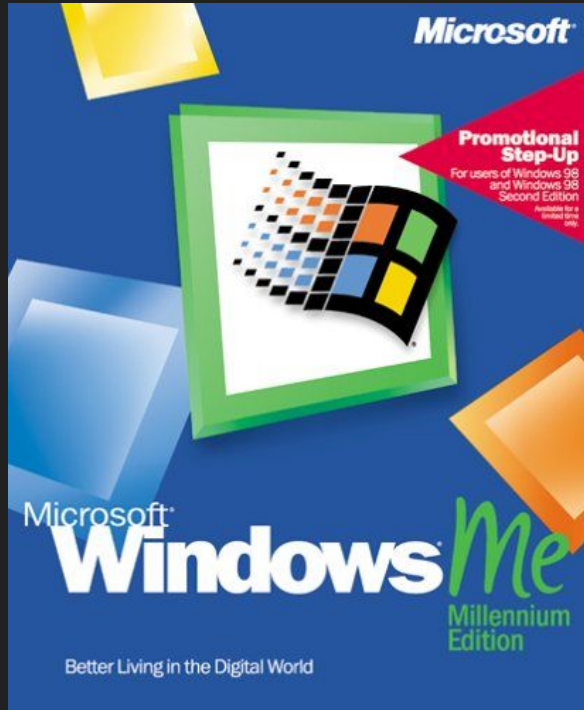


Fig 1. Draw two circles



Fig 2. Draw the rest of the **** Owl

How Not to Prototype



How to draw an Owl.

"A fun and creative guide for beginners"



Fig 1. Draw two circles



Fig 2. Draw the rest of the **** Owl

`[[break]]`

Evaluation: User Testing

- Qualitative (understand experiences)
 - Observation (e.g., 'Think Aloud' study)
 - Survey and/or interview
 - Semi-structured Interviews
 - Focus Groups
 - Gathering usage feedback
 - Role-playing
 - Participatory Research
 - Preference evaluation
 - Rankings
 - Affinity Diagramming (for responses)
 - Card Sorting



Evaluation: User Testing

- Quantitative (understand performance)
 - Task-based metrics (e.g., completion time, task count)
 - A/B Testing
 - Eye tracking
 - Controlled measurement
 - Data-centric
 - e.g., data mining of user interaction traces
 - Usage logs



User Testing



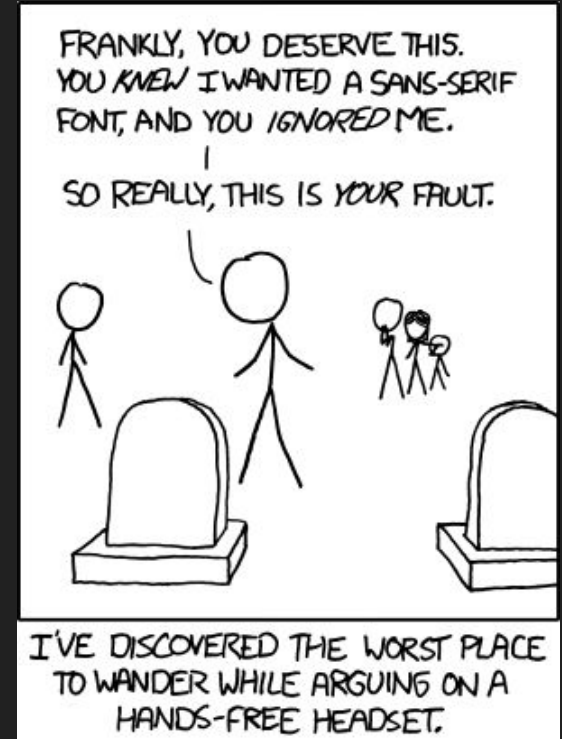
<https://twitter.com/designuxui/status/576432203560685568>

Results



Benefitting From User Testing

- What went wrong?
- What went right?
- Is there a 'gulf of understanding'?
- How could these issues be addressed?
 - Functionality
 - Instructions / priming
 - Experience... (e.g., for 'expert' features)
- Are the users the right stakeholder to address?



Example Design Process

< in teams >

Questions?