User Centered Design

Why User Centered Design is important

Approaches to User Centered Design
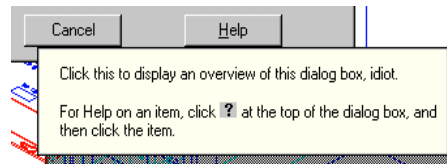

The Design Of Well Crafted Tools

The All Too Common Approach In The Design Of Software

Microsoft Access ☒

⚠ **Wrong button!**
This button doesn't work.

Solution
Try another.

[OK]

| Cancel | Help | |

Click this to display an overview of this dialog box, idiot.

For Help on an item, click ? at the top of the dialog box, and then click the item.
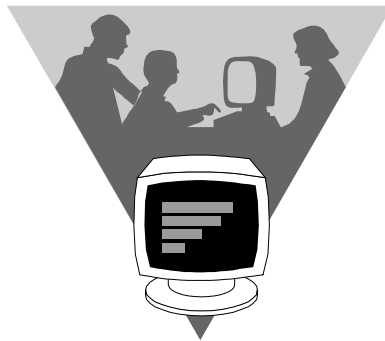
AutoCAD Mechanical

James Tam

System Centered Design

What can be built easily on this platform?

What can I create from the available tools?

What do I as a programmer find interesting to work on?

James Tam

User Centered System Design

Design is based upon a user's
- Abilities and real needs
- Context
- Work
- Tasks

…know the person you are designing for.

User Centered System Design

Three assumptions

- A good design will satisfy the needs of the user group
- Collaborative
- Constant communication

From Denning and Dargan, p111 in Winograd, Ed., Bringing Design to Software, Addison Wesley

Participatory Design

Problem
- Intuitions wrong
- Traditional methods (e.g., interviews) suffers from a number of weaknesses
- Designer cannot know the user sufficiently well to answer all issues that come up during the design

The user is just like me

Solution
- Designers should have access to pool of representative users
    - ACTUAL end users, not their managers or union reps!

Participatory Design

Users become first class members in the design process

Users considered subject matter experts

Iterative design process

Participatory Design (Up Side)

Users are excellent at reacting to actual designs (prototypes).

Users can bring in important "folk knowledge" of their work context.

Often results in greater "buy in" for the final system

Participatory Design (Down side)

Hard to get a good pool of end users.

Users are not expert designers.

The user is not always right.

Methods For Involving The User

1) At the very least, talk to users
• It's surprising how many designers don't!

2) Contextual Inquiries
• Interview users **in their usage place** (e.g., office), as they are **doing their job**
• Used to discover user's culture, requirements, expectations, etc.

Methods For Involving The User (2)

3) Create prototypes
• It's hard to comment on something that doesn't yet exist

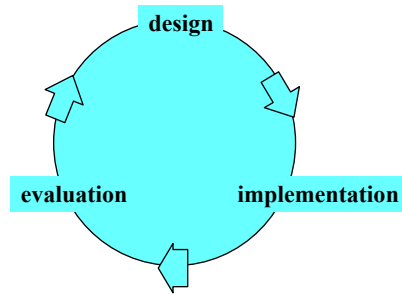• Users are good at giving feedback for something that is even partially built

Beavis and Butthead are the intellectual property of Paramount Pictures and the MTV Television Network

Methods For Involving The User (3)

3) Create prototypes (continued)
- Get input at all design stages
  - All designs subject to revision

design

evaluation   **implementation**

What You Now Know

User centered design
- The design is based upon a user's real needs, tasks, and work context

Participatory design
- It brings the **end-user** in as a first class citizen into the design process

Interface Design and Usability Engineering

Goals:

| Articulate: • who users are • their key tasks | Brainstorm designs | Refined designs | Completed designs |

Methods:

Task centered system design

Participatory design

User-centered design

Evaluate tasks

Psychology of everyday things

User involvement

Representation & metaphors

Participatory interaction

Task scenario walk-through

Graphical screen design

Interface guidelines

Style guides

Usability testing

Heuristic evaluation

Field testing

low fidelity prototyping methods

high fidelity prototyping methods

Products:

| User and task descriptions | Throw-away paper prototypes | Testable prototypes | Alpha/beta systems *or* complete specification |

James Tam