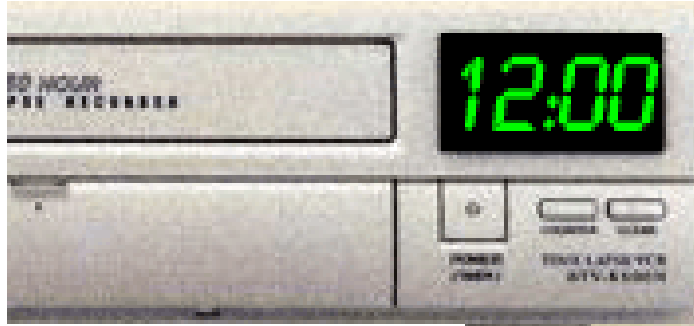
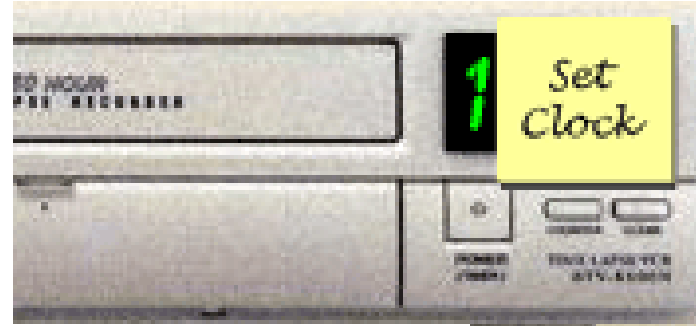


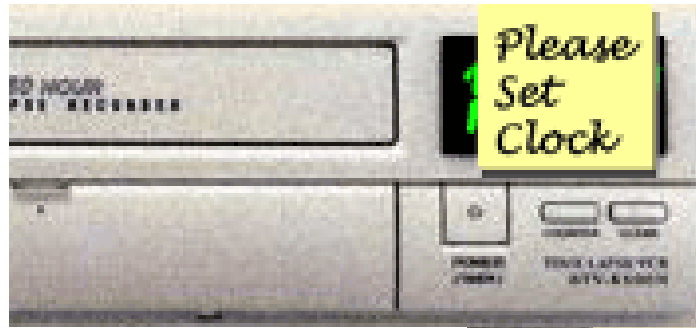
CS 147: Intro to HCI



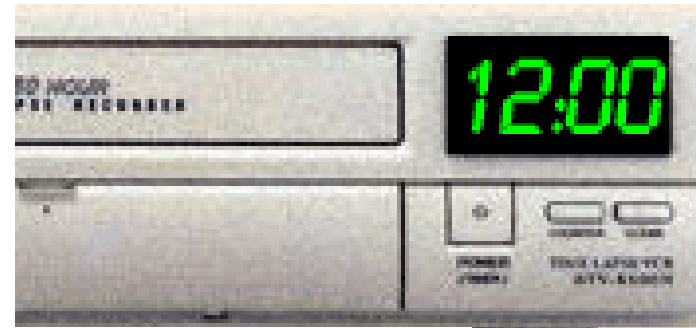
Before usability



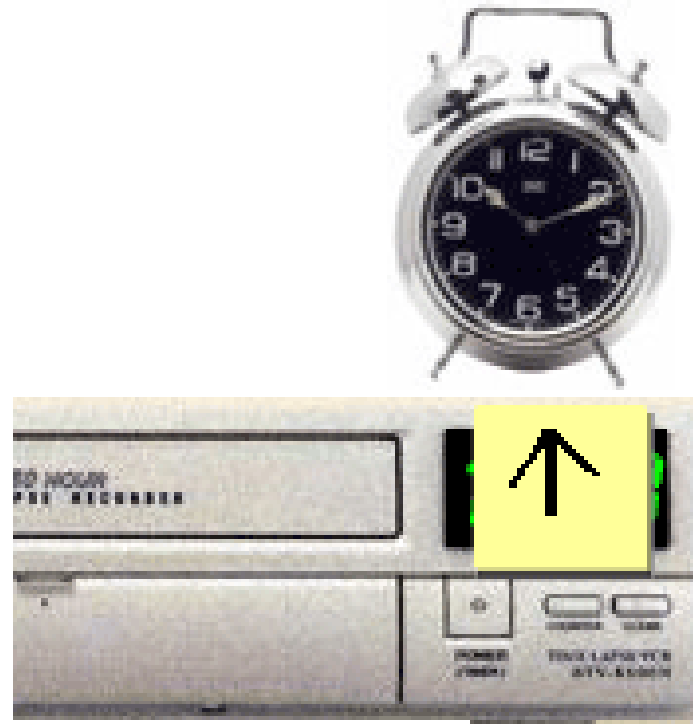
After 1st Usability
Review



After 2nd Usability Review



After Usability



After feedback from Don Norman
(which cost me \$25,000)

Plans for Today

- Project Overview
- Terminology recap
- Usability Breakdown Presentations

Project Summary

- Teams of 4, assigned next week
- Project broken down into a series of milestones
 - Contextual Inquiry
 - Project Proposal
 - Storyboards
 - Paper Prototype
 - User Testing
 - High Fidelity Prototype

Project Grading

- Project deliverables due Wednesday at midnight
- Your team meets with CAs for 30 minute sessions to discuss project progress
- Professor Winograd will be present during some feedback sessions, and you will be assigned a grade on your interim progress and deliverables

Final Project Fair

- In Wallenberg Hall, December 6th, 6-9pm
- Present your completed project to a team of industry judges and others from the Stanford community
- No final exam!

Terminology of Interactive System Design

- Affordances
- Constraints
- Conceptual Models
- Mappings
- Visibility
- Feedback
- Consistency

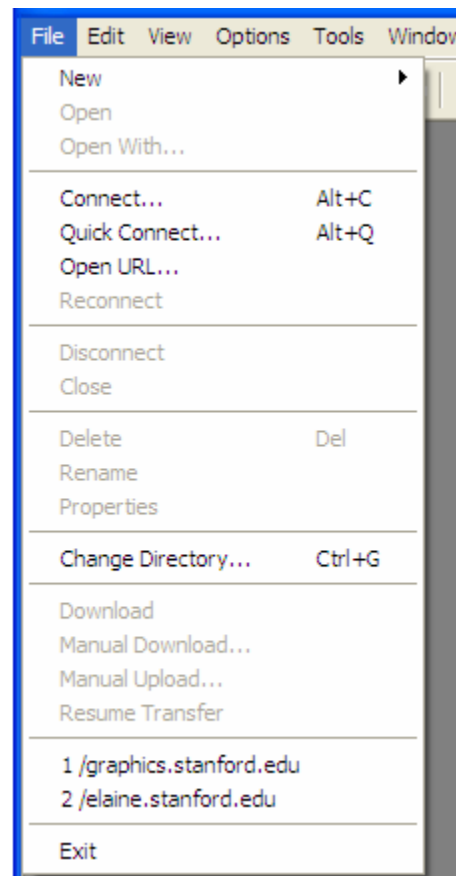
Affordances

- Attribute of an object that allows people to know how to use it



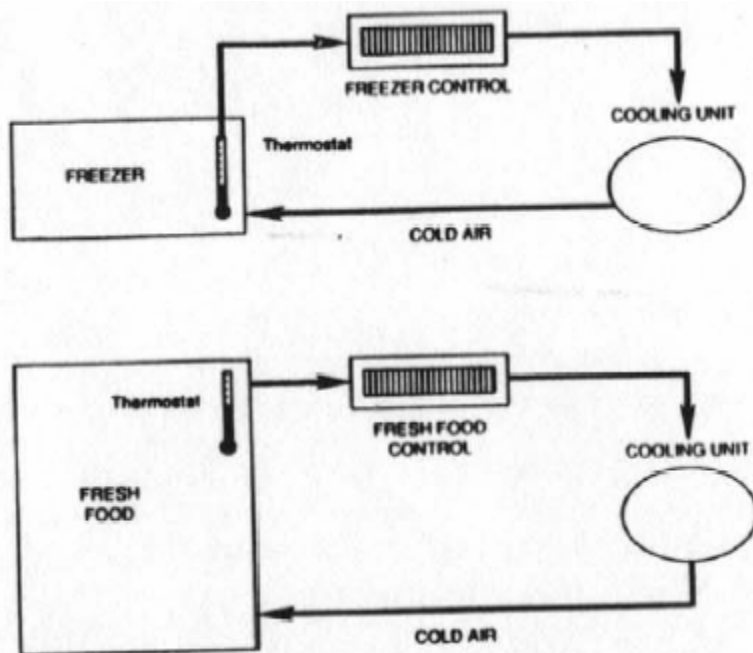
Constraints

- Restricting interaction to reduce errors

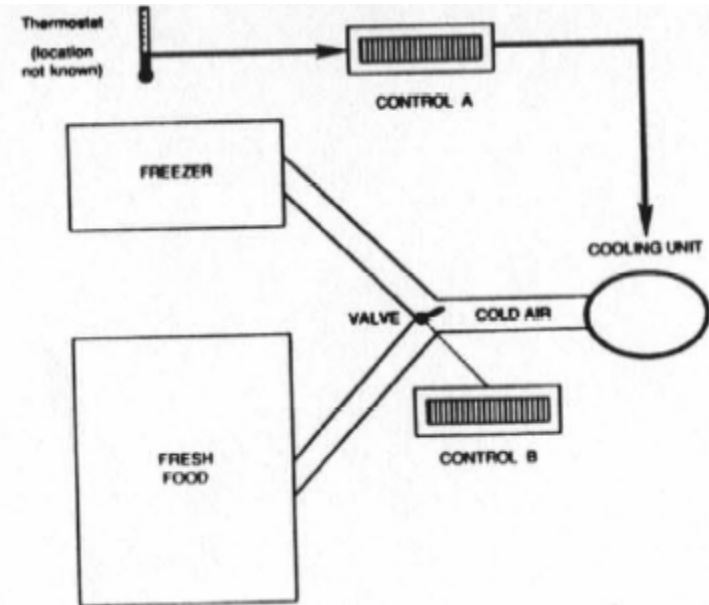


Conceptual Model

- A set of ideas about how an interactive system behaves

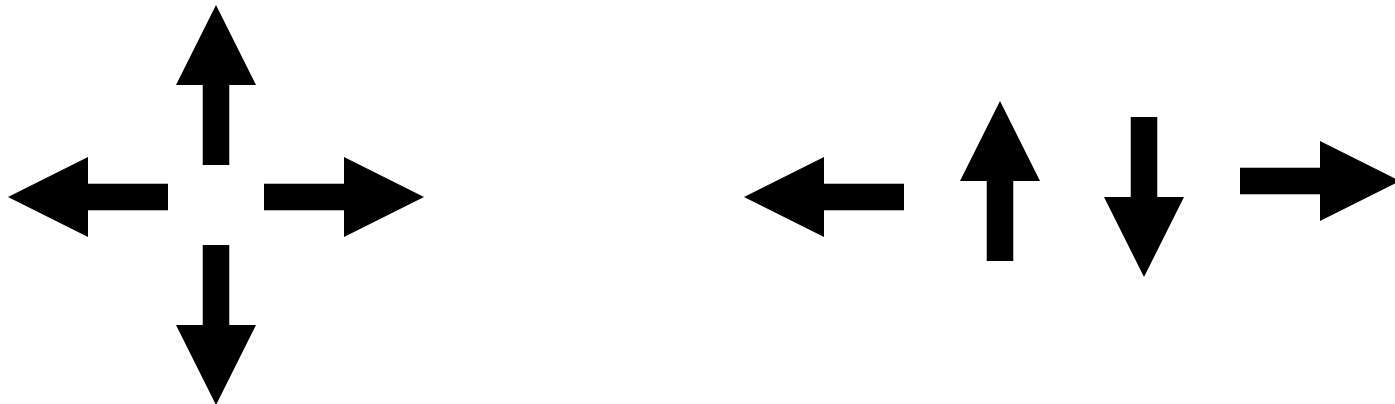


VS.



Mapping

- Relationship between controls and their effects on the world



Visibility

- Making it obvious which actions are available

Feedback

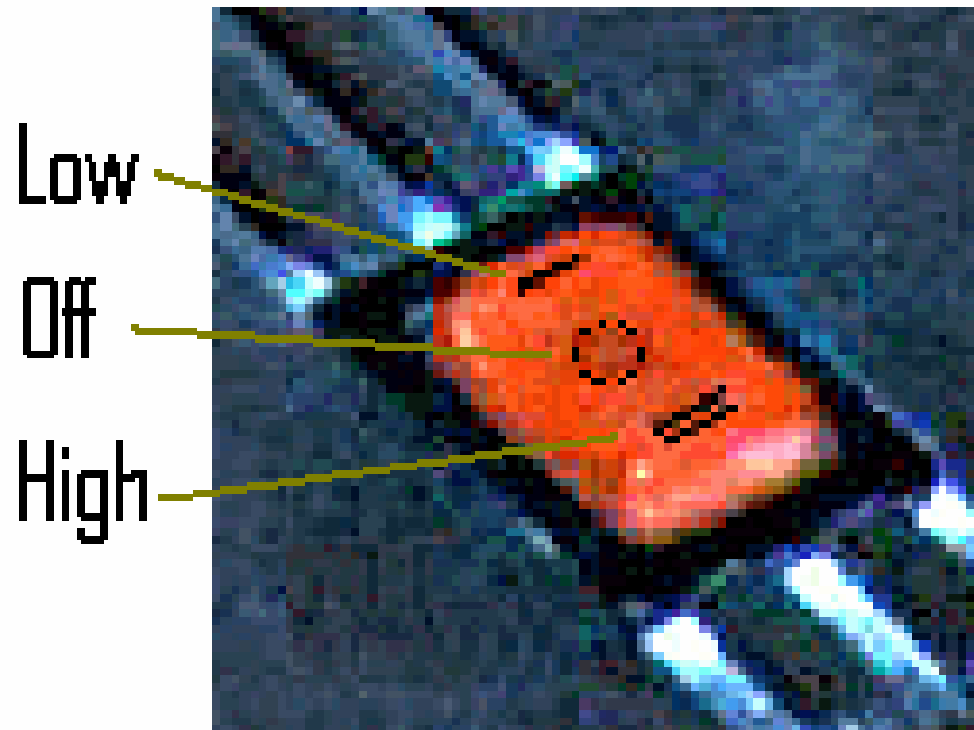
- Send information about what is happening back to the user

Consistency

- Similar functions are performed in the same way
- Identical terminology for identical operations

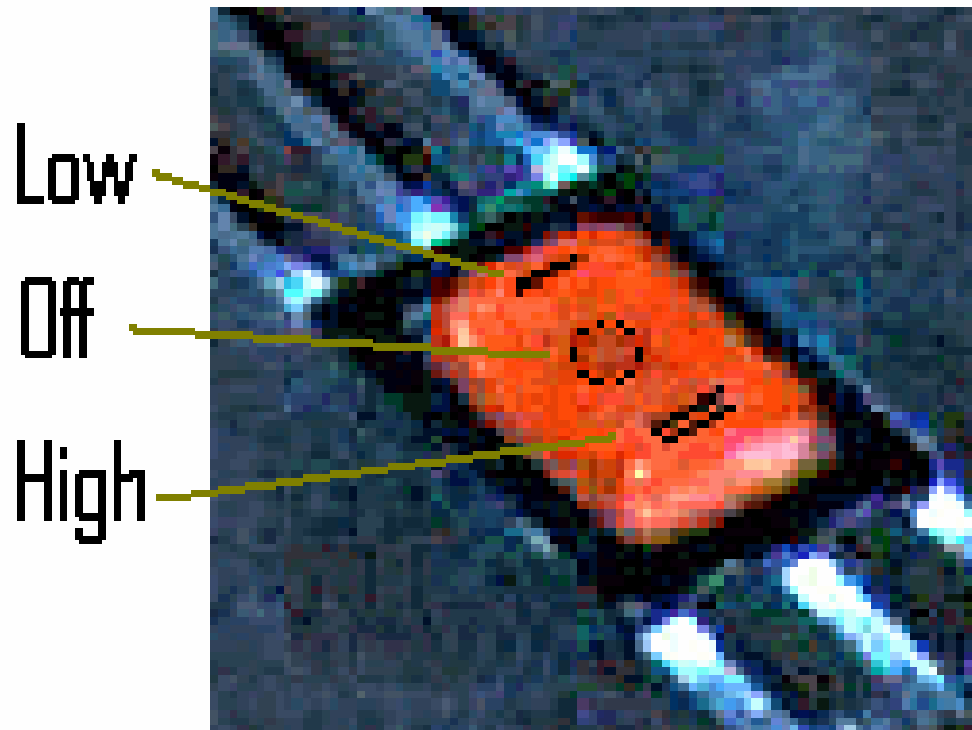
What's Wrong?

Lamp Switch



What's Wrong?

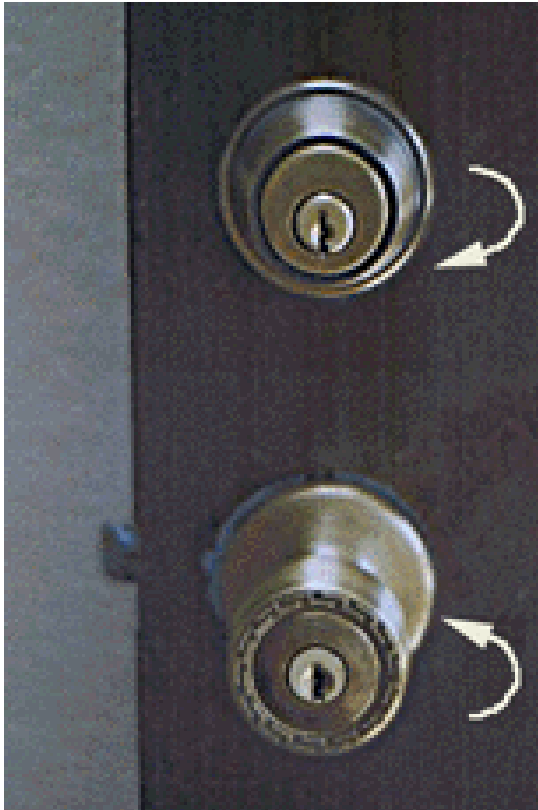
Lamp Switch



Mapping – we'd expect to go, off, low, high

Feedback – when lamp is on, hard to tell from switch position whether it's in low or high mode

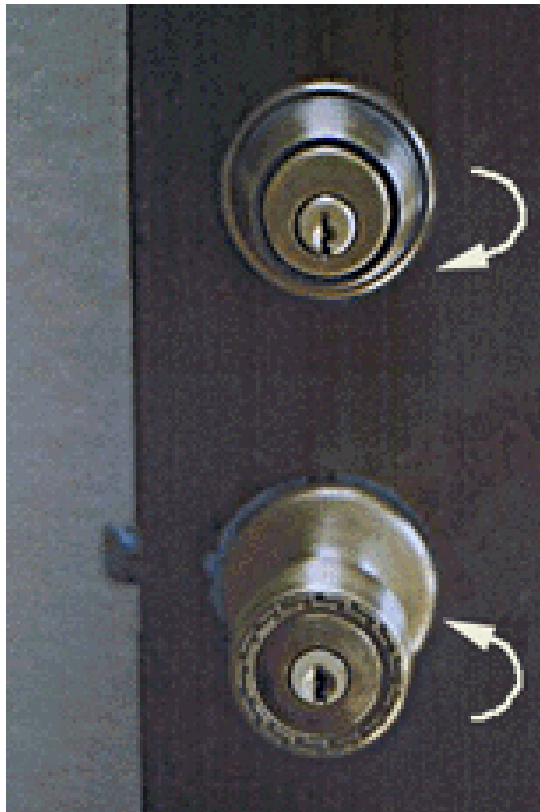
What's Wrong?



Turn key this way to
unlock deadbolt

Turn key this way to
unlock doorknob

What's Wrong?

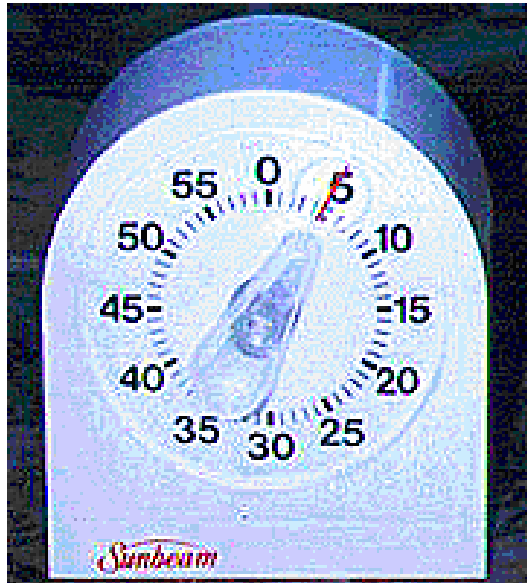


Turn key this way to
unlock deadbolt

Turn key this way to
unlock doorknob

Consistency:
different
procedure for
locking top than
for locking
bottom

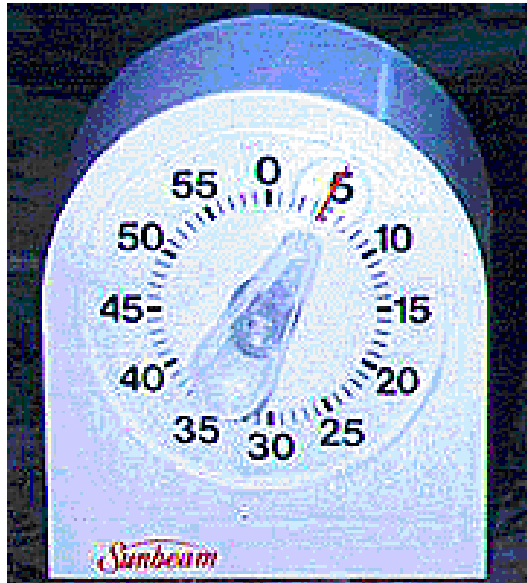
What's Wrong?



To set timer, turn to desired time.

For times less than 15 minutes,
turn past 15 minutes, then turn
back to desired time.

What's Wrong?



To set timer, turn to desired time.

For times less than 15 minutes, turn past 15 minutes, then turn back to desired time.

CONSISTENCY: Different procedure for setting different intervals of time.

FEEDBACK: When timer is at a time under 15 minutes, hard to tell if it's actually on or not (silent failure).

What's Wrong?



Our three-year-old son received this camera (Photo A) as a gift. The camera was designed for children. Our son used the camera to take pictures, but being curious, couldn't resist pressing all the buttons on the camera, including the button on the side of the camera that opens the film compartment (Photo B). He kept opening the camera and ruining the film.

What's Wrong?



CONSTRAINTS: The system could constrain the user from opening the compartment until the film is at the end of the reel.

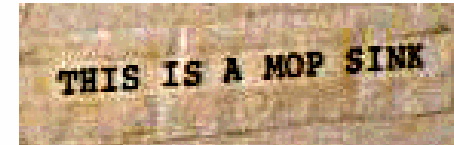
AFFORDANCES: The big friendly blue button affords pushing.

What's Wrong?

Men's Restroom



Close-up of sign:



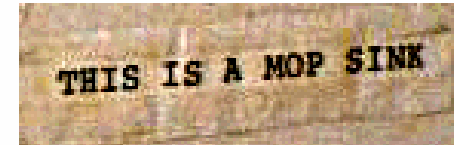
"THIS IS A MOP SINK"

What's Wrong?

Men's Restroom



Close-up of sign:



"THIS IS A MOP SINK"

AFFORDANCES:

The basin affords peeing in.

Usability Breakdown

- My action causes something I did not expect or want
- I want to do something, and cannot figure out how