Questions?

- Email – Please prefix all course email with " CMSC434: "

- Class email list setup – you should have received one message from me on it.

- Survey being mailed out after class. If you don't receive it, you must contact TA.

Today

- The Psychology of Everyday Things (POET)
- Fundamental design principles
- Brainstorming

Psychopathology of everyday things

- Everyday frustrations
  - Blame it on the users?
    - *Need to read the manual?*
    - *They should learn?*

Psychopathology of everyday things

- Everyday frustrations
  - Blame it on the users?
    - *Need to read the manual?*
    - *They should learn?*
  - Blame it on poor design?
    - *Does not take into account basic human capabilities*
      - How humans perceive the world
      - How humans learn
      - How humans deal with error

Psychopathology of everyday things

- How many of you can program or use all aspects of your
  - *digital watch?*
  - *VCR?*
  - *sewing machine?*
  - *washer and dryer?*
  - *stereo system (especially car ones)*
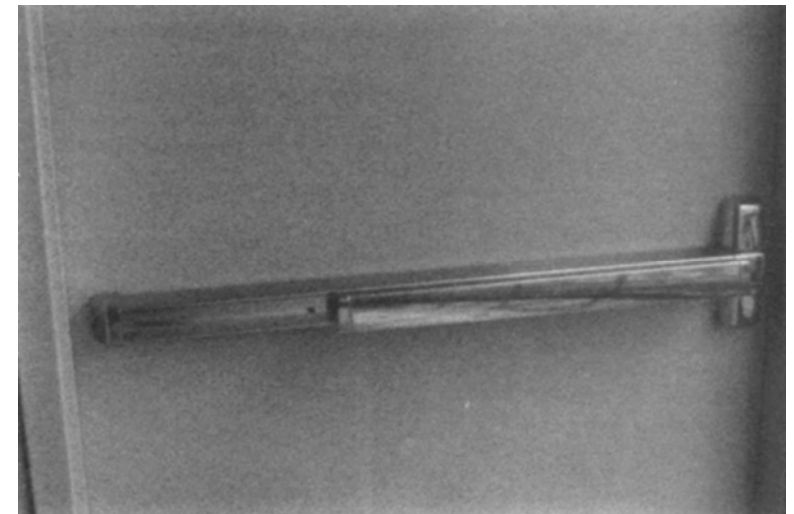 - *unfamiliar water faucets*
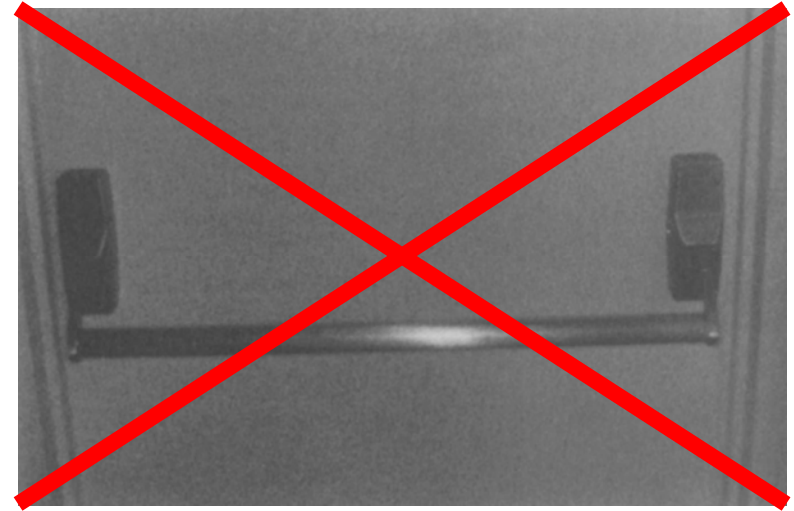
We're Not Designing For Ourselves

Darn these hooves! I hit the wrong switch again!
Who designs these instrument panels, raccoons?

Fundamental Design Goals

"… the **affordances** of objects … convey messages about their possible uses, actions, and functions" (Norman, p82)

"is for" - objects, not environments

Different population, different affordances

- Kids
  - How to deal with small shoes?

- Elderly
  - Age Explorer suit (Meyer-Hentschel)

- Disabled users…
  - Limited vision, movements,…

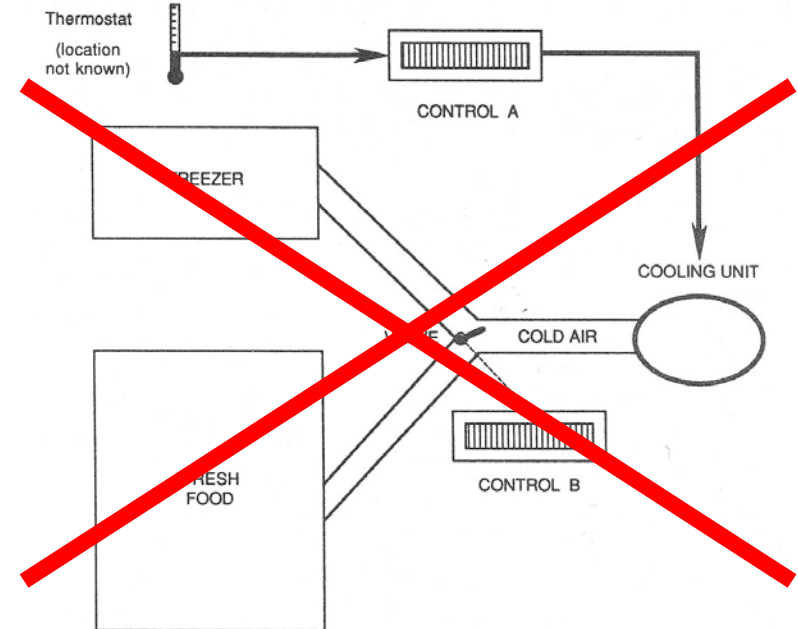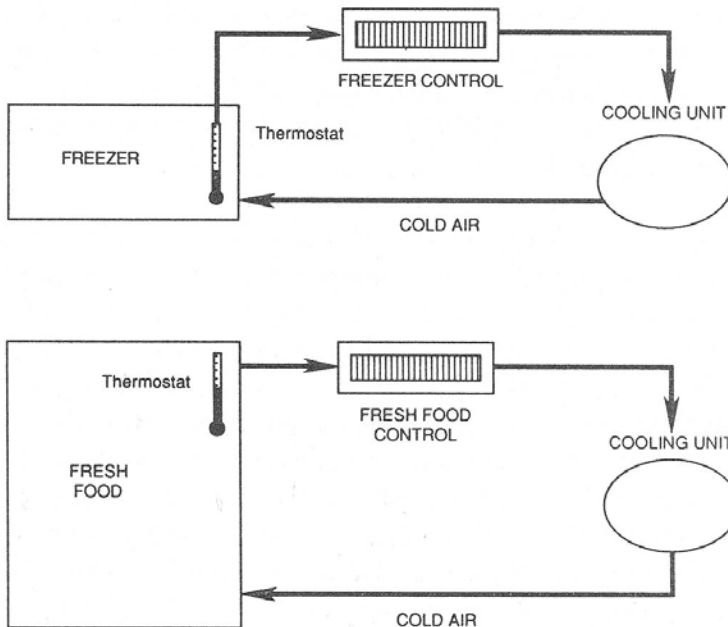Age Explorer suit (I.D. magazine)

Fundamental Design Goals

- Provide the right affordances
- Provide the right **mental model**
  - complexity

Fundamental Design Goals

- Provide the right affordances
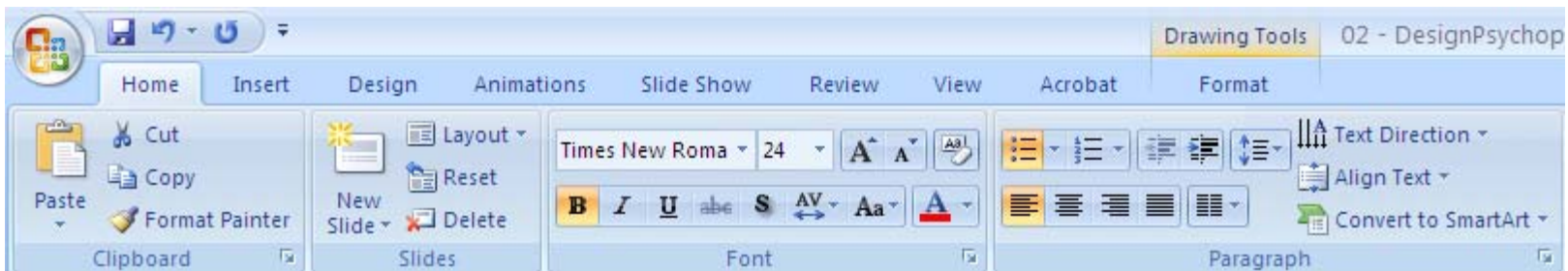- Provide the right **mental model**
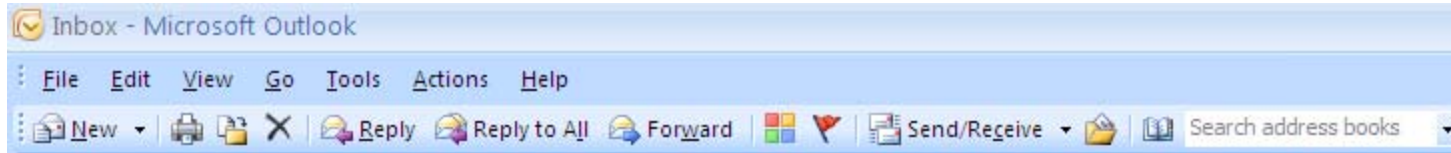 - Fridge control

Fundamental Design Goals

- Provide the right affordances
- Provide the right mental model
- Provide a good **mapping**

Fundamental Design Goals

- Provide the right affordances
- Provide the right conceptual model
- Provide a good mapping
- Make things **visible**
  - Menus

Fundamental Design Goals

- Provide the right affordances
- Provide the right conceptual model
- Provide a good mapping
- Make things visible
- Provide **feedback**
    - Visual, tactile, auditory…

Fundamental Design Goals

- Provide the right affordances
- Provide the right conceptual model
- Provide a good mapping
- Make things visible
- Provide feedback
- Recognize **causality**
  - Be responsive

Constraints

- Cost
  - But it costs more to manufacturer a good input device

- Space
  - But there isn't room to put one controller per function

- Discoverability
  - Given that we've hidden some controls, how do people find them?