Interaction design basics

Content derived from Dix, Finlay, Abowd, Beale [http://www.hcibook.com/](http://www.hcibook.com/)
interaction design basics

- design:
  - what it is, interventions, goals, constraints
- the design process
  - what happens when
- users
  - who they are, what they are like ...
- scenarios
  - rich stories of design
- navigation
  - finding your way around a system
- iteration and prototypes
  - never get it right first time!
interactions and interventions

- design interactions not just interfaces
  - not just the immediate interaction
  - e.g. stapler in office – technology changes interaction style
    - manual: write, print, staple, write, print, staple, …
    - electric: write, print, write, print, …, staple

- designing interventions not just artifacts
  - not just the system, but also …
    - documentation, manuals, tutorials
  - what we say and do as well as what we make
What is design?
What is design?

Achieving Goals Within Constraints
What is design?

Achieving Goals Within Constraints

- goals
  - who is it for, why do they want it
- constraints
  - materials, platforms
- trade-offs
Understand your materials
Golden Rule of Design

Understand your materials
Understand your materials

- For Human-Computer Interactions
  - understand computers
    - limitations, capacities, tools, platforms
  - understand people
    - psychology, social
  - expect human error
  - understand the interaction between them
accident reports ...
- aircrash, industrial accident, hospital mistake
- inquiry … blames … ‘human error’
- but …
  - concrete platform breaks because too much weight
  - blame ‘platform error’?
    ... no – it’s a design error
    we know how concrete behaves under stress
- human ‘error’ is normal
  - we know how users behave under stress
  - so design for it!
- treat the user at least as well as physical materials
Focus on the user
Design Process

- What is wanted
- Analysis
- Design
- Prototype
- Implement and deploy
Design Process

- What is wanted
  - interviews, ethnography
  - what is there?
  - what is wanted?

Analysis
  - scenarios
  - task analysis
  - guidelines
  - principles

Design
  - specification
  - evaluation
  - heuristics

Prototype
  - documentation
  - help

Implement and deploy
Steps...

• requirements
  • what is there and what is wanted ...
• analysis
  • ordering and understanding
• design
  • what to do and how to decide
• iteration and prototyping
  • getting it right ... and finding what is really needed!
• implementation and deployment
  • making it and getting it out there