InteractionDesign

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Interaction Design

- You should be familiar with HCI from second year
- ID is the application of HCI theories to designing systems
- You may see it referred to as “User Centred Design”
- The important thing is the focus on the user and their needs
Stages of Interactive Design

➢ There are three basic activities:
  – Identifying needs and establishing requirements
  – Developing alternative designs
  – Evaluating designs

➢ These are carried out in some iterative development methodology
  – Usually a RAD derivative
Three key characteristics permeate these activities:

1. Focus on users early in the design and evaluation of the artefact
2. Identify, document and agree specific usability and user experience goals
3. Iteration is inevitable. Designers never get it right first time
Some practical issues

- Who are the users?
- What are ‘needs’?
- Where do alternatives come from?
- How do you choose among alternatives?
Who are the users?

• Not as obvious as you think:
  — those who interact directly with the product
  — those who manage direct users
  — those who receive output from the product
  — those who make the purchasing decision
  — those who use competitor’s products ???
More users

- Three categories of user:
  - primary: frequent hands-on
  - secondary: occasional or via someone else;
  - tertiary: affected by its introduction, or will influence its purchase.

Wider term: stakeholders
Who are the users? (contd)

• What are their capabilities? Humans vary in many dimensions!
• Some examples are:
  — size of hands may affect the size and positioning of input buttons;
  — motor abilities may affect the suitability of certain input and output devices;
  — height if designing a physical kiosk;
  — strength - a child’s toy requires little strength to operate, but greater strength to change batteries
What are ‘needs’?

• Users rarely know what is possible
• Users can’t tell you what they ‘need’ to help them achieve their goals
• Instead, look at existing tasks:
  — their context / what information do they require?
  — who collaborates to achieve the task?
  — why is the task achieved the way it is?
• Envisioned tasks:
  — future tasks
Alternatives?

- Humans stick to what they know works
- But considering alternatives is important to ‘break out of the box’
- Designers are trained to consider alternatives, software people generally are not
- How do you generate alternatives?
  - ‘Flair and creativity’: research & synthesis
  - Seek inspiration: look at similar products or look at very different products
iMac
Choosing alternatives?

- Evaluation with users or with peers e.g. prototypes
- Technical feasibility: some not possible
- Quality thresholds: Usability goals lead to usability criteria set early on and check regularly
  - safety: how safe?
  - utility: which functions are superfluous?
  - effectiveness: appropriate support? task coverage, information available
  - efficiency: performance measurements
What next?

- We will get to using prototypes to help choose between design alternatives
- Before we do, we will focus on gathering user requirements