Human–Computer Interaction
post-millennial models

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course outline

Week 1: 19–23 May 2003

basics of HCI and cognition
Tues 20th May am and pm

- lightening introduction
- vision 3D and colour
- time

human context strand
Wed 21st May am and pm and Thurs 22nd May am

- scenarios
- task analysis
- rich work ecologies
- understanding interaction

Week 2: 26–30 May 2003

system definition strand
Mon 26th May pm and Tues 27th May am and pm

- understanding state
- physical–logical mappings
- continuous interaction and time
- formal interaction modelling

at the edge
Thurs 29th May am and pm

- designing experience
- innovation and creativity

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scenarios

- stories for design
  - communicate with others
  - validate other models
  - understand dynamics

- linearity
  - time is linear - our lives are linear
  - but don't show alternatives

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scenarios …

- what will users want to do?

- step-by-step walkthrough
  - what can they see (sketches, screen shots)
  - what do they do (keyboard, mouse etc.)
  - what are they thinking?

- use and reuse throughout design

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movie player

Brian would like to see the new film "Moments of Significance" and wants to invite Alison, but he knows she doesn't like "arty" films. He decides to take a look at it to see if she would like it and so connects to one of the movie sharing networks. He uses his work machine as it has a higher bandwidth connection, but feels a bit guilty. He knows he will be getting an illegal copy of the film, but decides it is OK as he is intending to go to the cinema to watch it. After it downloads to his machine he takes out his new personal movie player. He presses the 'menu' button and on the small LCD screen he scrolls using the arrow keys to 'bluetooth connect' and presses the select button. On his computer the movie download program now has an icon showing that it has recognised a compatible device and he drags the icon of the film over the icon for the player. On the player the LCD screen says "downloading now", a percent done indicator and small whirling icon. … … …

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play act …

- mock up device
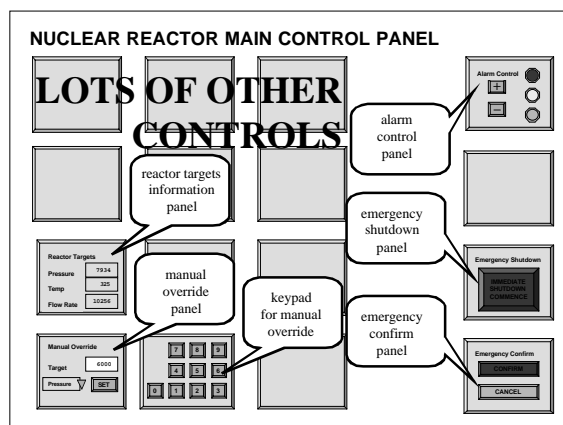- pretend you are doing it

swiss army knife …

persona

- description of an 'example' user
  - not necessarily a real person
- use as surrogate user
  - what would Betty think
- details matter
  - makes her 'real'

example persona

Betty is 37 years old, She has been Warehouse Manager for five years and worked for Simpkins Brothers Engineering for twelve years. She didn't go to university, but has studied in her evenings for a business diploma. She has two children aged 15 and 7 and does not like to work late. She did part of an introductory in-house computer course some years ago, but it was interrupted when she was promoted and could no longer afford to take the time. Her vision is perfect, but her right-hand movement is slightly restricted following an industrial accident 3 years ago. She is enthusiastic about her work and is happy to delegate responsibility and take suggestions from her staff. However, she does feel threatened by the introduction of yet another new computer system (the third in her time at SBE).

NUCLEAR REACTOR MAIN CONTROL PANEL

Emergency Scenario

Jenny, the Nuclear Power Plant operator has normal sight and no physical or perceptual impairments. Her shift started at 11pm and it is now 5am in the morning. So far the plant has been operating within normal parameters and the current alarm state is therefore green

1. Jenny notices the core reaction rate has risen very rapidly
2. she realises she must immediately change the reactor target pressure to correct this
3. she goes to the Alarm Control Panel on the far right of the main reactor control panel and presses '+' twice (as it is starting off in green state)
4. the Emergency Confirm button glows red
5. she moves across to the Manual Override panel on the far left of the main reactor control panel
   ... ...

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depths

- explore interaction
  - what happens when

- explore cognition
  - what are the users thinking

- explore architecture
  - what is happening inside