MSc / MRes AID

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course outline

techniques
- mon – intro & scenarios
- tue – task analysis
- wed – dialogue design
- thur – state definition
- fri – architecture

issues
- experience and value
- media
- networks and web
- ubiquitous interaction
- time

the human
- colour
- 3D vision
- closure

examples
- excel (modes, closure)
- hci search (value)
- car courtesy lights

textbooks

- Human-Computer Interaction 2nd edition. A. Dix, J. Finlay, G. Abowd and R. Beale. Prentice Hall, 1998.
- Human-Computer Interaction. J. Preece, Y. Rogers, Helen Sharp, D. Benyon, Simon Holland and T. Carey. Addison Wesley, 1994.
- Interaction Design, Preece et al. Wiley, 2002

edited collections

- *Human-Computer Interaction Handbook*, J. Jacko and A. Sears. Lawrence Erlbaum, 2003.
- *Perspectives on HCI*, A. Monk and N.Gilbert, Academic Press, 1995 (hard to get hold of now)

due out by next spring ...

- *HCI Models, Theories, and Frameworks: Toward an Interdisciplinary Science*. J. Carroll. Morgan Kaufmann.
- *Funology: From Usability to Enjoyment*. M. Blythe, A. Monk and P. Wright. Kluwer, 2003.

what you will learn (I hope!)

- facts (read the book!)
  - about systems and about humans
- analysis
  - deep understanding of issues
- design
  - from understanding to solutions
- attitude
  - thinking about real use and real users

HCI

changes and trends

increasing multiplicity

- 1980s - personal computers
  - one man and his machine
  - and they were men!

increasing multiplicity

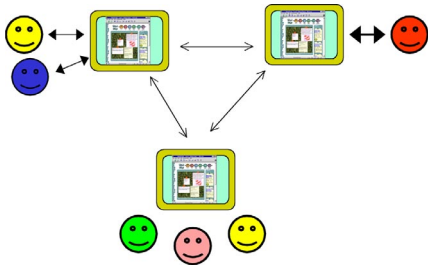
- 1980s - personal computers
- late 1980's & 1990s - CSCW
  - lots of people
  - geographically remote
  - but ...
  - one person per machine

increasing multiplicity

- 1980s - personal computers
- late 1980's & 1990s - CSCW
- family use, global networks, ubiquitous devices

families and friends

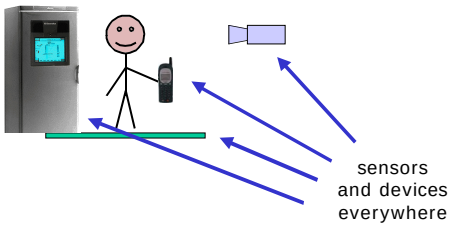
lots of people, together and remote



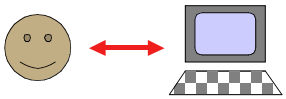
how many ...

- computers in your house?
- computers in your pockets?

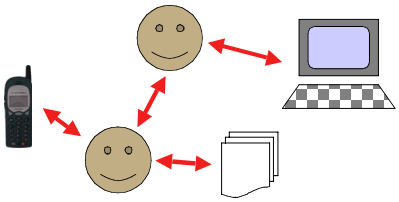
ubiquitous & wearable computing



from – dialogue with the computer



to – dialogue with the environment



+ ubicomp – no computer/artefact divide
wearable/cyborg – no computer/user divide

work and fun

- traditional HCI methods
  - tasks, goals, work, work, work
  - and the odd game
- now
  - e-shopping, communities, home
  - experience and enjoyment
  - more decision points

useful, usable and used

- useful
  - functional, does things
- usable
  - easy to do things, does the right things
- used
  - attractive, available, acceptable to organisation

design

what is design?

achieving goals within constraints

- goals - purpose
  - who is it for, why do they want it
- constraints
  - materials, platforms
- trade-offs

golden rule of design

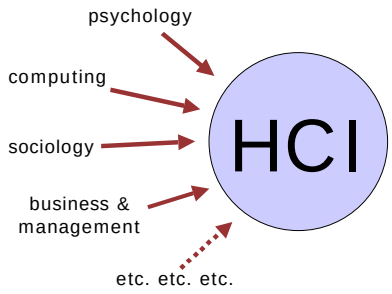
understand your materials

for Human–Computer Interaction

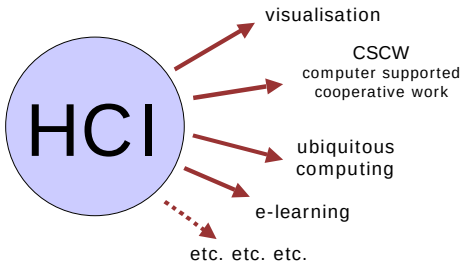
understand your materials

- understand computers
  - limitations, capacities, tools, platforms
- understand people
  - psychological, social aspects
  - human error
- and their interaction …

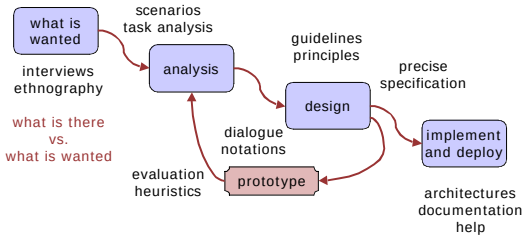
many roots



many branches



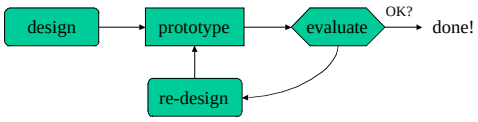
interaction design process



prototyping

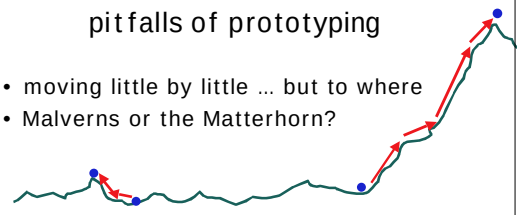
prototyping

- you never get it right first time
- if at first you don't succeed …



pitfalls of prototyping

- moving little by little … but to where
- Malverns or the Matterhorn?



1. need a good start point
2. need to understand what is wrong

first steps

know your user

- who are they?
- probably not like you!
- talk to them
- watch them
- use your imagination

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

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