

**ICS 105:
Project in HCI**

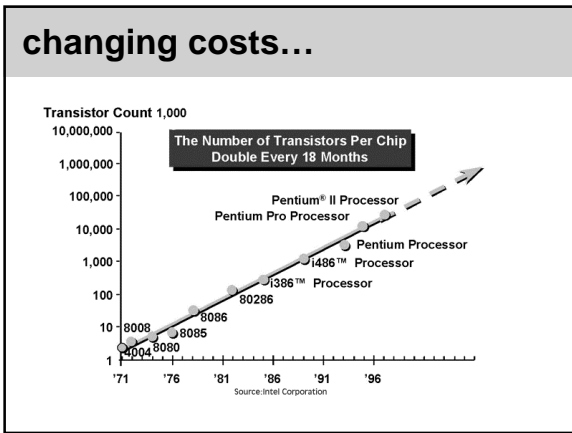
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UCI Information & Computer Science

why hci matters

- interaction is on the rise
 - 1960s
 - computers become fast enough to support interaction
 - 1970s
 - the development of the GUI
 - 1980s
 - GUIs go mainstream
 - 1990s
 - the emergence of *networked* interaction
 - 2000 and on
 - virtual reality, augmented reality, mobile devices, *ubiquitous computing*

why hci matters

- computer systems are increasingly interactive
 - as computers become faster, activities move from “batch” to “interactive”
 - e.g. information visualization
 - e.g. distributed information networks (Napster?)
 - the interesting uses of technology are those that people experience directly
- interactive devices are increasingly computational



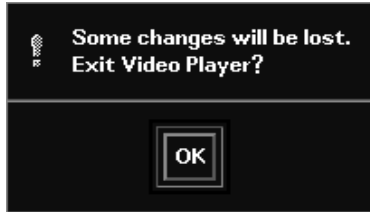
computers in devices

- computation costs only a few dollars
- computer systems replace analog
 - telephones, audio players, video players, ovens, door knobs!
- “interaction” is broadening
 - more than traditional screens and GUIs
 - specialised and embedded devices
 - need to understand how interaction works

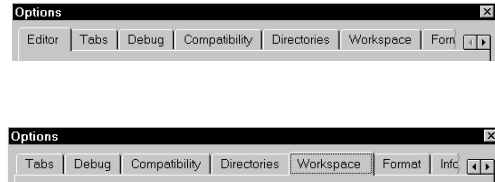
bad design is all around...

- why do we believe this is difficult?
- because we get it wrong so often!

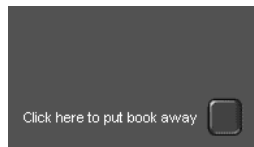
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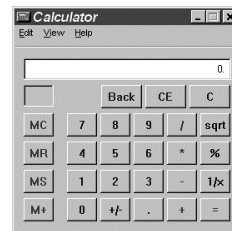
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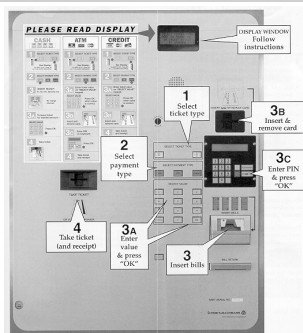
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goals

- understand the fundamentals
 - theory
 - mental models, human factors, etc
 - process
 - investigation, prototyping, design, evaluation
- learn how to apply them
 - project focus
 - the lifecycle
 - design, prototyping, development, evaluation
- this is a lot to cover in 10 weeks!

warnings

- there's going to be a lot of ground to cover
 - 105 is unusual
 - project class with no earlier theory class
 - we have to do it all
 - do the readings before class!
- you don't get graded on what doesn't work
 - coding will be in Java
 - we won't be doing remedial Java coaching
 - JFC/Swing for UI
 - we'll cover this in lectures

administrivia

- class times
 - lectures: Tu, Th: 12:30-1:50, PSCB
 - discussion: scheduled as needed
 - regular meetings with teams
- class web page
 - <http://www.ics.uci.edu/~jpd/ics105>
 - lecture notes, project outlines, syllabus, timetable

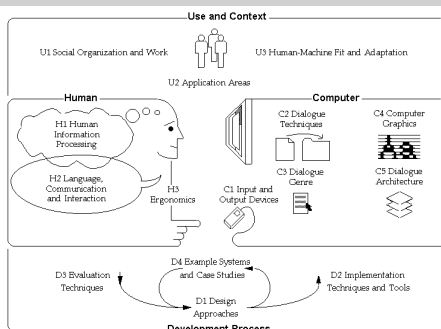
personnel

- instructor
 - Paul Dourish <jpd@ics.uci.edu>
 - office ICS2 206
 - office hours by appointment
 - I'm generally available, but email me to make sure
- teaching assistants
 - Shreyas Doshi <doshi@acm.org>

evaluation

- breakdown
 - 25% midterm
 - 75% project
- project grading
 - final system
 - intermediate deliverables
 - reports on prototyping and evaluation

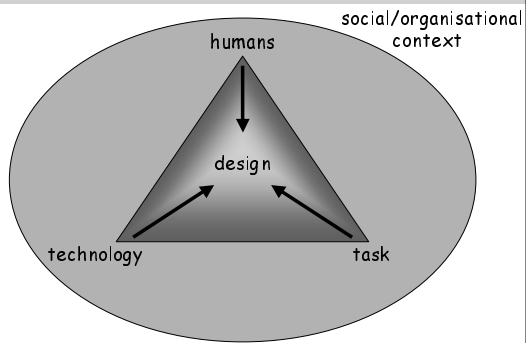
the scope of HCI



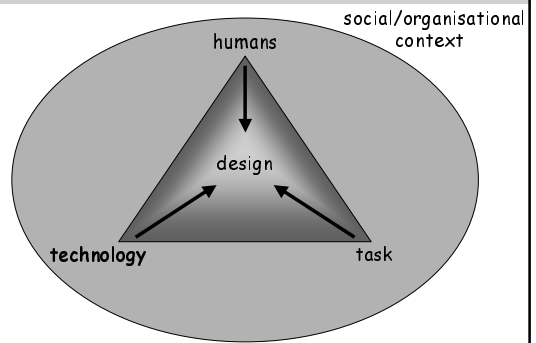
interface vs interaction

- more than just user interfaces
 - buttons and menus don't make systems usable
- not interfaces but interaction
 - the whole context of using a computer system
 - the sequence of actions needed to carry out a task
 - fitting the system into the setting in which it's needed

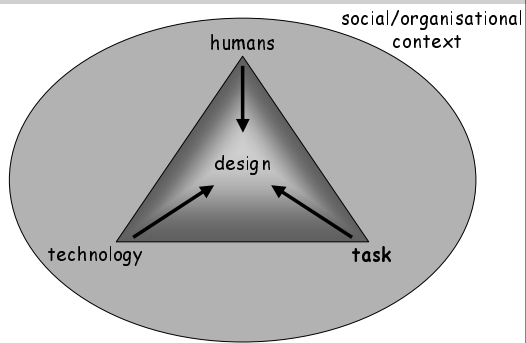
what is HCI?



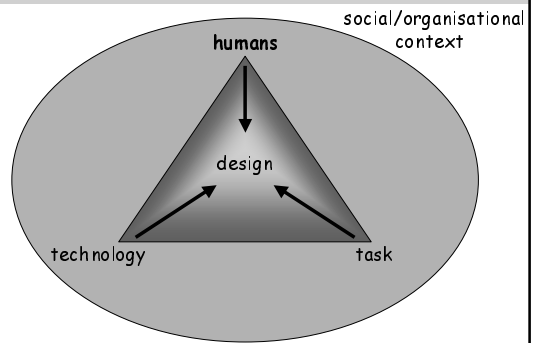
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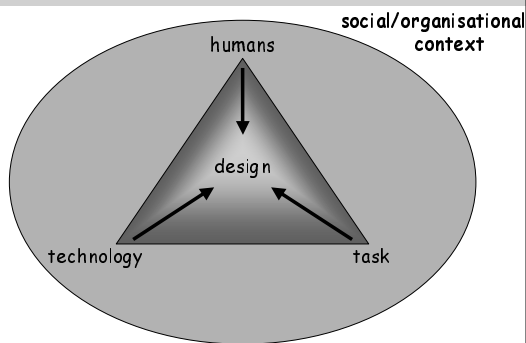
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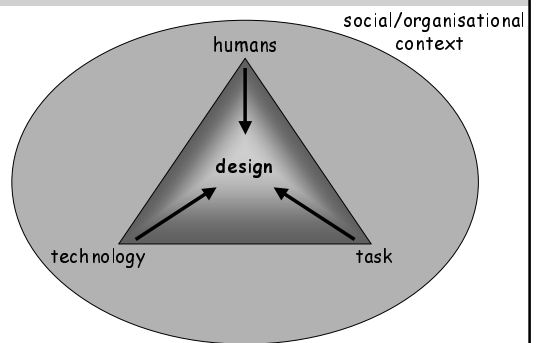
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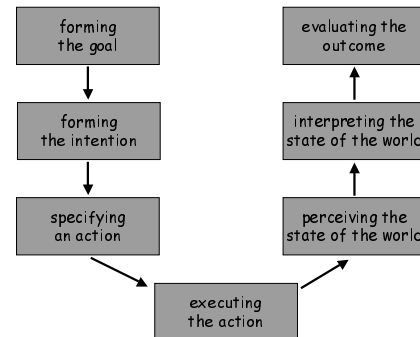
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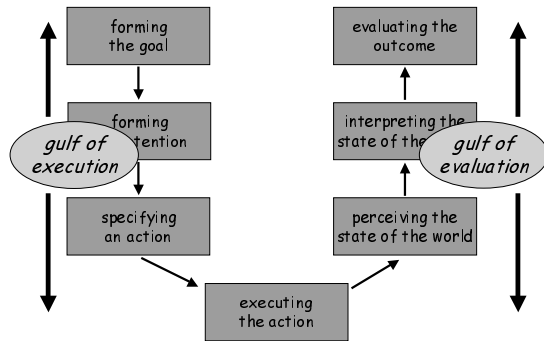
the challenge of hci

- understanding the technology
 - what are the opportunities? the constraints?
- understanding the task domain
 - what do people actually need to do?
 - how do interactive systems feature as part of work?
- understanding human action
 - what does it take for someone to use the system?

norman's seven-step model



norman's seven-step model



project

- main focus is a project – two features:
 - the artifact
 - the process

teams

- teams of four
 - team coordinator
 - design coordinator
 - implementation coordinator
 - testing coordinator
- coordinator role...
 - NOT leader!
 - NOT flunky!

topics

- see the web page for some suggestions
 - mp3 jukebox manager
 - digital photo archive
 - full text indexing
 - peer to peer architecture
- suggestions are welcome
 - write it up and get it to me soon
 - teams and projects are due end of next week
 - I must have approved the project by Wednesday

timetable

- phase 1: determine teams and projects
 - end of week two
- phase 2: design
 - the following two weeks
- phase 3: lo-fi prototyping
 - we'll coordinate these at the end of week four
- phase 4: redesign and implementation
 - following month
- phase 5: evaluation
 - week nine

next time

- history and general overview of HCI
 - read ch1, ch2 (43-50)