

The background features a dark blue gradient with a subtle starry pattern. On the left side, there are several overlapping circular elements. A prominent one is a large circle with a scale from 140 to 260 in increments of 10. Other circles include dashed lines, solid lines, and arrows indicating motion or direction. The overall aesthetic is technical and futuristic.

CIS 421 INTERACTION DESIGN

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CHAPTER 1

WHAT IS INTERACTION DESIGN?

- **Designing interactive products to support people in their everyday and working lives**
---Sharp, Rogers and Preece (2002)
- **The design of spaces for human communication and interaction**
---Winograd (1997)

THE AIM OF INTERACTION DESIGN

To design interactive products that are usable.



GOALS OF INTERACTION DESIGN

- **Develop usable products**
 - **Usability means easy to learn,**
 - **Effective to use and**
 - **Provide an enjoyable experience**
- **Involve users in the design process**

GOOD BAD DESIGN EXAMPLES

- Elevator controls and labels on the bottom row all look the same, so it is easy to push a label by mistake instead of a control button



- People do not make same mistake for the labels and buttons on the top row. Why not?

WHY IS THIS VENDING MACHINE SO BAD?



- Need to **push button first** to activate reader
- Normally **insert bill first** before making selection
- Contravenes well known convention

THIS REMOTE IS BETTER DESIGNED?



- **Peanut shaped to fit in hand**
- **Logical layout and color-coded, distinctive buttons**
- **Easy to locate buttons**

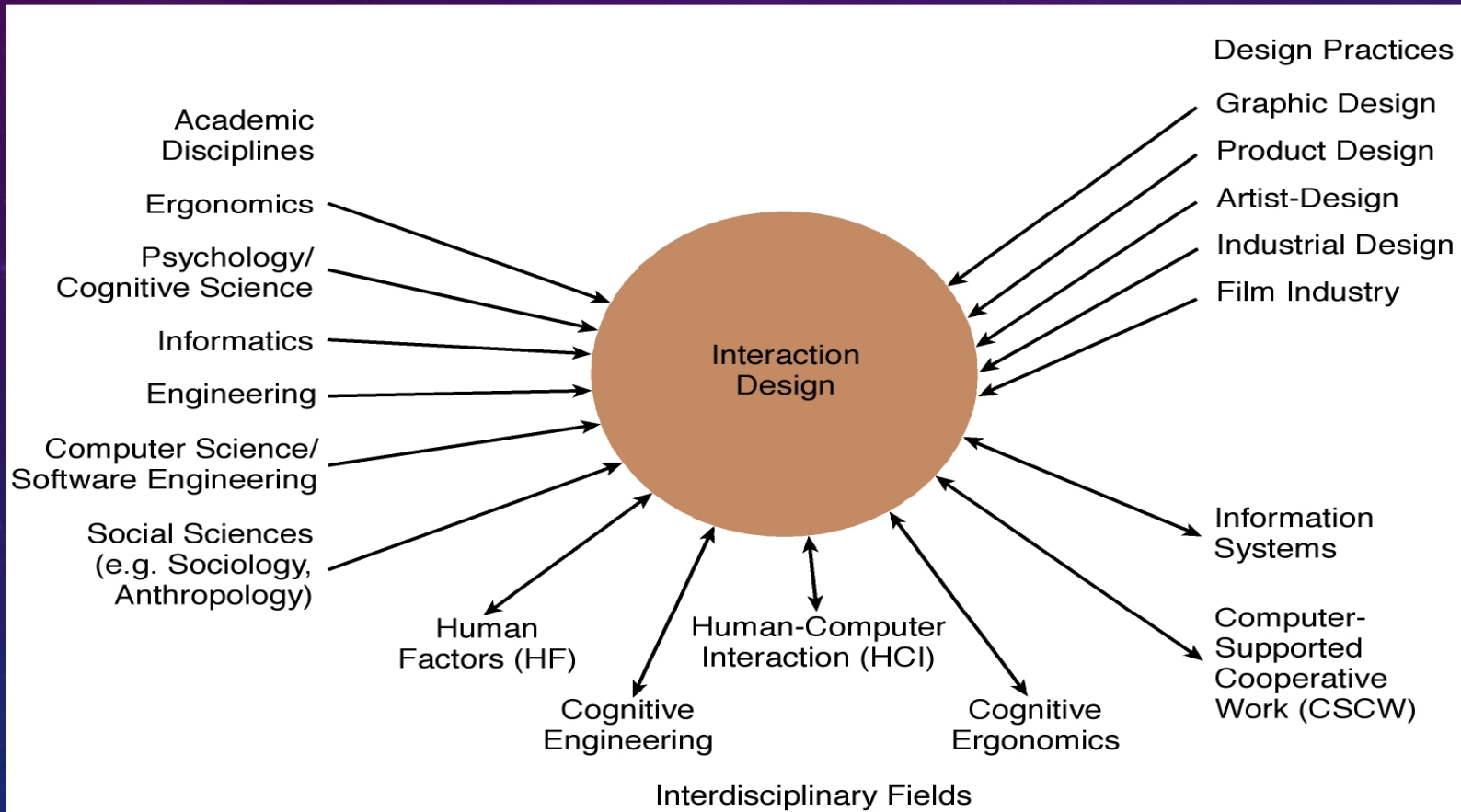
WHAT TO DESIGN?

- Need to take into account:
 - Who the users are
 - What activities are being carried out
 - Where the interaction is taking place
- Need to optimise the interactions users have with a product
 - Such that they match the users activities and needs

UNDERSTANDING USERS' NEED

- Need to take into account what people are good and bad at
- Consider what might help people in the way they currently do things
- Think through what might provide quality user experiences
- Listen to what people want and get them involved
- Use tried and tested user-centered methods

WHAT AREAS DOES IT COVER?



WHY STUDY THIS TOPIC?

- Interaction designers play an essential role in the development of successful products.
- Microsoft introduced Vista the successor to Windows XP in January 2007 but users moaned about a lack of driver support and intrusive security measures. Industry were worried about incompatibility with older applications.
- Microsoft hurriedly pushed out Windows 7 in October 2009 and hoped we would forget about Vista as soon as possible.

WHAT IS INVOLVED IN THE PROCESS OF INTERACTION DESIGN

- Identify needs and establish requirements
- Develop alternative designs
- Build interactive prototypes that can be communicated and assessed
- Evaluate what is being built throughout the process

CORE CHARACTERISTICS OF INTERACTION DESIGN

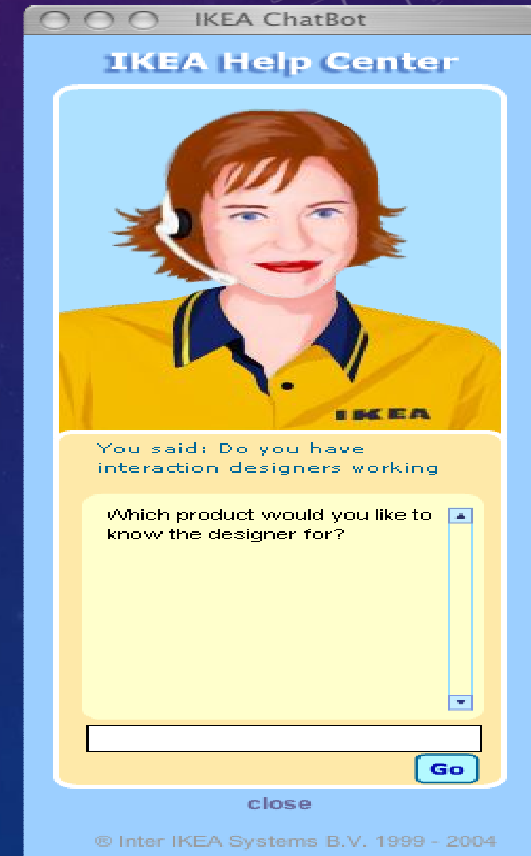
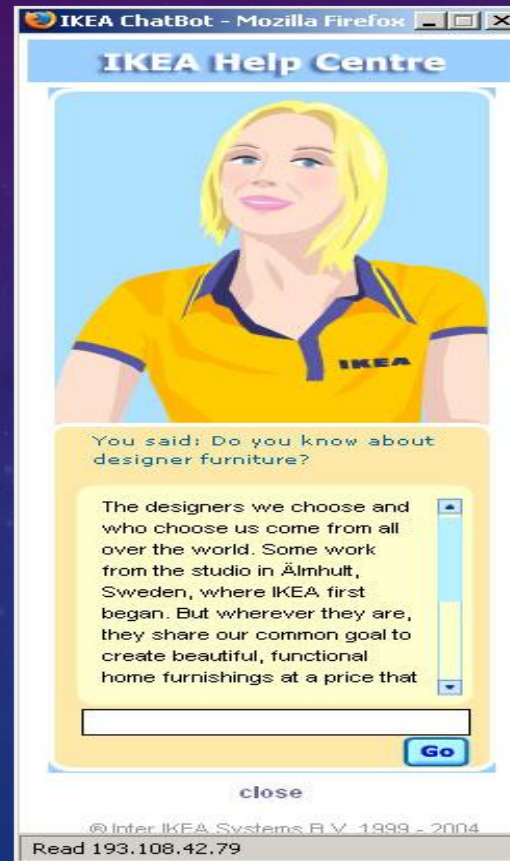
- Users should be involved through the development of the project
- Specific usability and user experience goals need to be identified, clearly documented and agreed at the beginning of the project
- Iteration is needed through the core activities

ARE CULTURAL DIFFERENCES IMPORTANT?

- 5/21/2012 versus 21/5/2012?
 - Which should be used for international services and online forms?
- Why is it that certain products, like the iPod, are universally accepted by people from all parts of the world whereas websites are reacted to differently by people from different cultures?

ARE CULTURAL DIFFERENCES IMPORTANT?

- Designed to be different for UK and US customers
- What are the differences and which is which?
- What should Anna's appearance be like for other countries, like India, South Africa, or China?



USABILITY GOALS

- Effective to use (effectiveness)
- Efficient to use (efficiency)
- Safe to use (safety)
- Having good utility (utility)
- Easy to learn (learnability)
- Easy to remember how to use (memorability)

USER EXPERIENCE GOALS

Desirable aspects

satisfying

helpful

fun

entertaining

enjoyable

motivating

provocative

cognitively

engaging

challenging

surprising

stimulating

pleasurable

enhancing sociability

rewarding

emotionally fulfilling

exciting

supporting creativity

Undesirable aspects

boring

unpleasant

childish

annoying

frustrating

patronizing

gimmicky

cutesy

making one feel guilty

making one feel stupid

DESIGN PRINCIPLES

- Generalizable abstractions for thinking about different aspects of design
- The do's and don'ts of interaction design
- What to provide and what not to provide at the interface
- Derived from a mix of theory-based knowledge, experience and common-sense

USABILITY PRINCIPLES (NIELSEN 2001)

- Visibility of system status
- Match between system and the real world
- User control and freedom
- Consistency and standards
- Help users recognize, diagnose and recover from errors
- Error prevention
- Recognition rather than recall
- Flexibility and efficiency of use
- Aesthetic and minimalist design
- Help and documentation

KEY POINTS

- ID is concerned with designing interactive products to support people in their everyday and working lives
- ID is multidisciplinary, involving many inputs from wide-reaching disciplines and fields
- ID is big business even after the dot.com crash!

KEY POINTS

- ID involves taking into account a number of interdependent factors including context of use, type of task and kind of user
- Need to strive for usability and user experience goals
- Design and usability principles are useful heuristics for analysing and evaluating interactive products

END OF CHAPTER 1 😊

Any Question?