



HUMAN-COMPUTER INTERACTION

THIRD
EDITION

DIX
FINLAY
ABOWD
BEALE

Human Computer Interaction (HCI)

Introduction

Textbook

Human-Computer Interaction” by Alan Dix (Author), Janet E. Finlay (Author), Gregory D. Abowd (Author), Russell Beale (Author), Prentice Hall 3rd Edition 2004, ISBN 978-0130461094, <http://www.hcibook.com/e3/>

Other books

- Benyon D, Turner P, Turner S. **Designing interactive systems.** Harlow, England: Addison-Wesley; 2005.
- Shneiderman, B. 2005 **Designing the User Interface: Strategies for Effective Human-Computer Interaction.** Addison-Wesley Longman Publishing Co., Inc.
- McCracken, D. D., Spool, J. M., and Wolfe, R. J. 2003 **User-Centered Web Site Development: a Human-Computer Interaction Approach.** Pearson Education.

Grading

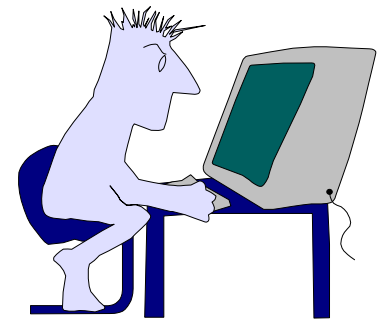
- A combination of
 - Assignment (10%)
 - Quizzes (5%)
 - In Class participation (5%)
 - project (10%)
 - Midterm (30%)
 - Final (40%)

What is HCI? /1

- Term “Human-Computer Interaction” (HCI) in widespread use since early 1980s
- Roots in other disciplines
 - Systematic study of human performance already started in the beginning of last century
 - Ergonomics / Human Factors
 - *Ergonomics* is the process of designing or arranging workplaces, products and systems so that they fit the people who use them.
- Previously man-machine interaction
 - Changed to human computer interaction with the introduction of information science & technology

What is HCI? /2

“Human-computer interaction is a discipline concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them”



What is HCI? /3

- It has to do with quality of design from the user's perspective
- The study of interaction between people and digital systems
- “Designing interactive products to support people in their everyday and working lives”

Disciplines involved in HCI

- Psychology & Cognitive Science
- Ergonomics: (Human Factors)
- Computer Science & System Design

An ATM machine

- Security code
- Choice of actions
- Retrieving money, etc.
- Getting Receipts (optional)
- Done



Don Norman's Door Example



A plate naturally says "push me" and a handle naturally says "pull me"

Don Norman's Door Example



When Don Norman's
advice is not
followed

Foundations of HCI /1

- Human Cognitive psychology:
 - the study of how people think and learn
 - The goal of cognitive psychology is to understand the psychological processes involved in the acquisition and use of knowledge by people.

Foundations of HCI /2

- Human Cognitive psychology:
 - In order to design something for someone, we need to understand their capabilities and limitations