Human Interface

Information

- Class: AS1, AS2
- Location: R.502, D9 building
- Schedule: Monday 14h00 - 15h40 (45 minutes x 2 x 15 weeks)

- Lecturer: VU Thi Huong Giang
  - Office:
    R.327 C1 building,
    1A Dai Co Viet street,
    10000 Hanoi
  - Phone: 38682595
  - Email: giangvth@soict.hut.edu.vn, vthgiang@gmail.com
  - Web site: http://www.fit.hut.edu.vn/~giangvh
  - **Reception hours: only by prior arrangement**

Human system's input

visual, auditory

smell

taste

haptics

tactile

proprioception

Human system's output

visual
auditory
tactile
haptics
proprioception
taste
smell

Human system

speech
- vocal
- non-vocal
- prosody

facial expression

hand gesture

body gesture

eye movement

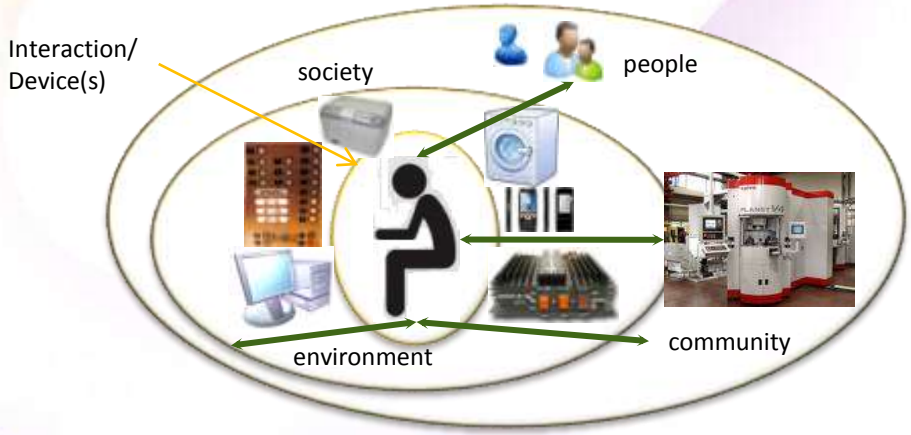
breath control

neural control
- EEG: Electroencephalography

bio-signals
- heart rate
- EMG: Electromyography
- GSR: Galvanic Skin Response

Human Interface vs. User Interface

- Human Interface (HI)



Information exchange and interaction (operation methodology, operation procedure, method of information display, etc.) between the human and the system

- User Interface (UI)

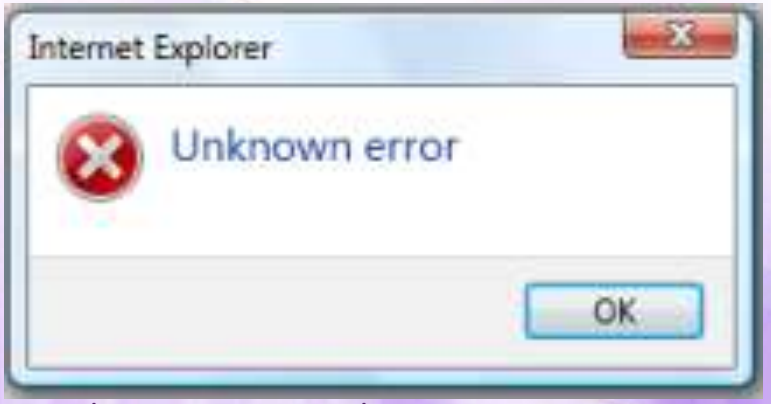
System operation (actual terminal button, etc.) to actuate information exchange and interaction with the system

Example of HI, UI

Good and bad design

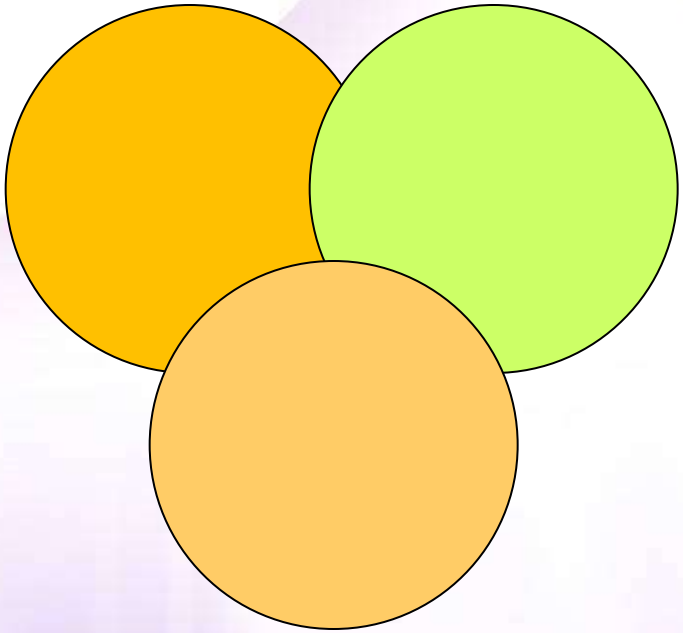
- What is wrong with the Apex remote?
- Why is the TiVo remote so much better designed?
  - Peanut shaped to fit in hand
  - Logical layout and color-coded, distinctive buttons
  - Easy to locate buttons

Bad designs are everywhere



Design

Art + Engineering



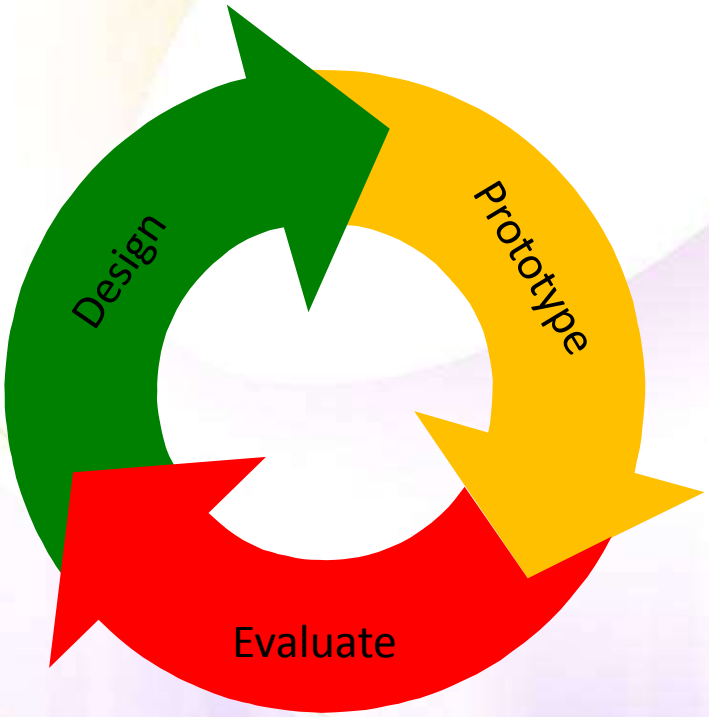
Computer Science

Science + Engineering

Psychology

Natural + Social Science

Course Description



- Develop an interface between human (user) and computer:
  - Design: principles, process, methods
  - Evaluation: qualitative, quantitative methods
- Design practices of human interfaces
  - included by modern interactive systems
  - fitting for the purposes of their diverse users in a variety of contexts:
    - Web system
    - Ubiquitous system
    - Universal system
    - Retrieval systems

Objectives and Results

- Objective:
  - Create usable and attractive human interfaces
- Expected results:
  - Understand concepts and terminologies used in human interface design
  - Understand the human information processing models.
- Skills developed:
  - Apply the basic design and evaluation methods to modern interactive systems.

Method of Evaluation

- Examination: 0 %
- Report (Term paper): 60 %
- Continuous Assessment: 40 %

Books & Materials

1. **DET:** The Design of Everyday Things, Donald Norman, Basic Books, ISBN 0465067093
2. **ESUID:** The Essential Guide to User Interface Design: An Introduction to Gui Design Principles and Techniques, Wilbert O. Galitz, John Wiley & Sons, ISBN 0471157554
3. **ISO9241**
4. **SP:** Search Patterns: Design for Discovery, P. Morville, J. Callender, O'Reilly Media, ISBN 0596802277
5. **UAD:** Universal and accessible design for products, services and processes, R.F. Erlandson, CRC, ISBN 0849374936
6. **UCF:** Ubiquitous Computing Fundamentals, J. Krumm, CRC, ISBN 9781420093605

Schedule

Class/ Week	Topic	Reading	Report / Assessment
1	Introduction and Overview	DET: Chapter 1 : pp. 1-32	
2	Interactive system development process	DET: Chapter 7 : pp. 187-218	x
3	**Students Presentation about interactive system development process**		
4	Interface Design	DET: Part B	x
5	Testing & Evaluation	DET: Chapter 13: pp.413-442	x

Schedule

Class/ Week	Topic	Reading	Report / Assessment
6	Web Interface	ESUID: Chapter 2: pp. 15-51	X
7	Ubiquitous Interface	UCF: Chapter 6: pp.237-284	X
8-9	**Student Presentation about Human Interface References**		
10	Universal Design	UAD: Chapter 2: pp. 29-36, Section 3: pp. 63-218	X
11	Retrieval Interface	SP: Chapter 1-2: pp.1-50, Chapter 4: pp.81-130	x
12	Design Engineering	ESUID: Part 2	x
13-14	**Student Presentation about New Interface Proposal**		
15	Wrap-up topics		

Questions ???