

Programming of Interactive Systems (Interfaces et Systèmes Interactifs) ISI, HCID 103

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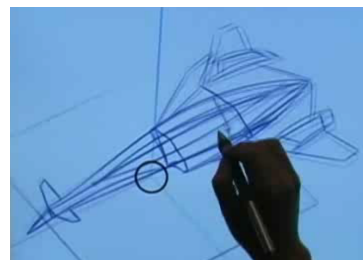
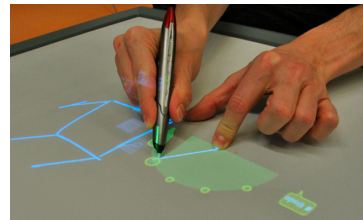
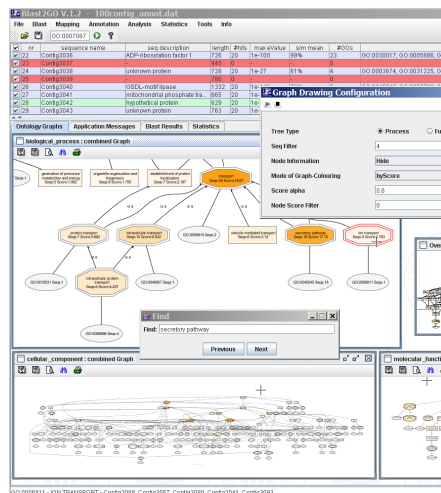
Week 1 :

a. Introduction, Objectives, Definitions

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(part of this class is based on previous classes from Anastasia,
and of T. Tsandilas, S. Huot, M. Beaudouin-Lafon, N.Roussel, O.Chapuis)

interactive systems



class details

Class in room B212

TAs : programming exercises (Java)

TD1: with David in English (room D204)

TD2: with Cedric in French (room E202)

2 design + programming assignments

1 exam

web site:

<http://www.lri.fr/~anab/teaching/M1-IS-2013/>

Contact by Email: **[IS]** in the title

objectives

Discover interactive systems

Intro on the development of such systems:

- Toolkit approaches
- Programming techniques
- Code organization
- Tools

Intro on their design & evaluation

Very brief intro on research and innovation in HCI

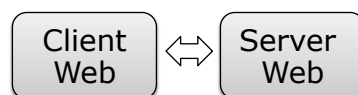
content

- toolkits and interface engineering
- MVC interaction model and code organization
- programming (desktop/Web)
- intro to HCI (brief history, importance, ergonomics)
- interaction styles
- users (perception, cognition, motor performance)
- design guidelines and prototyping methods
- design considerations for the Web
- usability & evaluation
- advanced interfaces

definitions

interactive system

software that interacts with its environment



human-computer interactive system

interactive system whose environment is one or more (human) users



User Interface (UI) - human computer interface

part of an interactive system that:

- represents its internal state on **output** peripherals
- captures & manages input from **input** peripherals

all hardware and software that allows users to control, supervise and communicate with an interactive system

Interactive System = interface + functional layer

Graphical User Interface (GUI)

Interface

that uses *output* peripherals (screen, projector)

+

some *input* peripherals (_{mouse, pen}) that provide *relative positions w.r.t.* the *output* peripherals

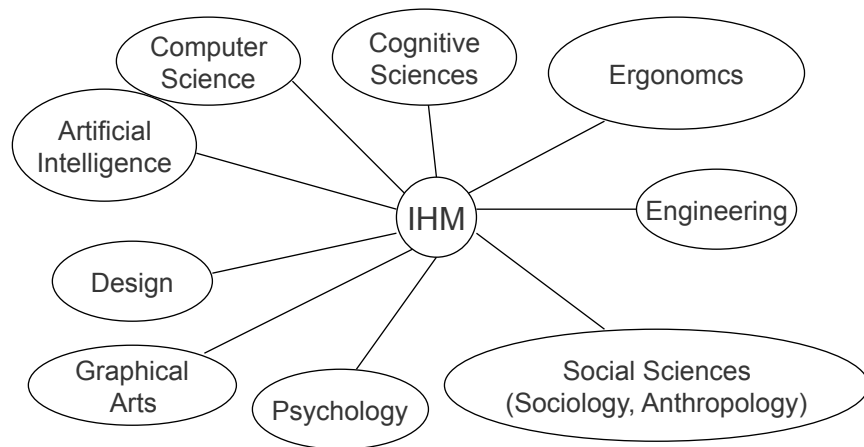
to

allow reference to aspects on the interface using pointing (thus linking input/output)

human computer interaction

"HCI 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.**"
(an) ACM definition

hci is multidisciplinary



interface = user interface

interactive system =
human-computer interactive system

engineers and computer scientists are *not* (by default) good interface designers:

they (we) are expert computer users,
their (our) interest is the computer or
the interface

what interests users is what the interface and
the computer helps them do

we have to design **FOR** and **WITH** users.

importance

the quality of UI is important as they are used
worldwide and in every domain, including critical
systems (where lives are at risk)

importance

- Machine for paying for parking (Tullamarine airport in Melbourn)
- For a year, an airport employee was hired to help users!



Photographs courtesy of Penelope Sanderson



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