

CMSC 434  
Introduction to  
Human Computer Interaction

François Guimbretière  
CSIC 2117 Tue-Thu 2:00-3:15

# CMSC 434 Administrivia

- Instructor

- François Guimbretière (HICL)

- *Office hours (Room 3267 AVW):*

- Tue, Thu 10:00am – 11:00am

- or by email any time: francois@cs.umd.edu

- or by appointment

- drop in/telephone discouraged

- TA

- Khoo Yit Phang

- *Office hours (Room 1112)*

- Mon 9:00 – 11:00am, Wed 1:00 – 3:00pm

- khooy@cs.umd.edu

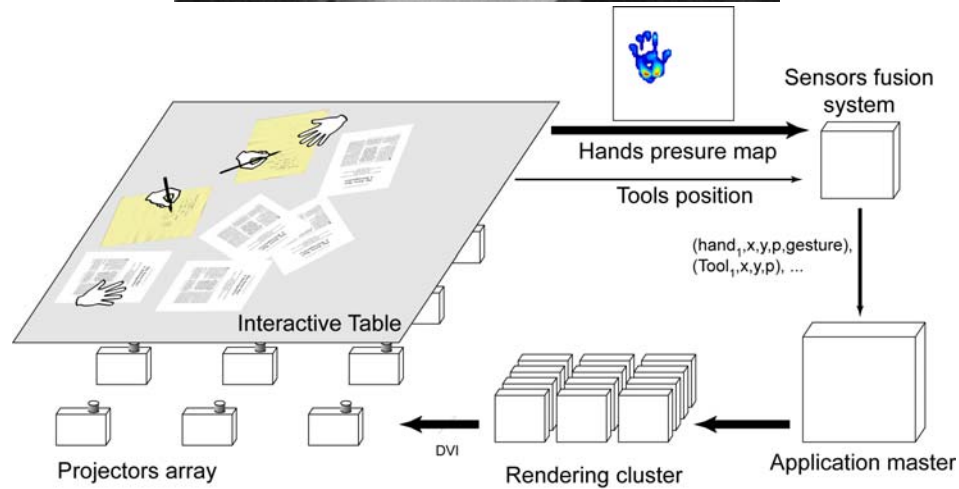
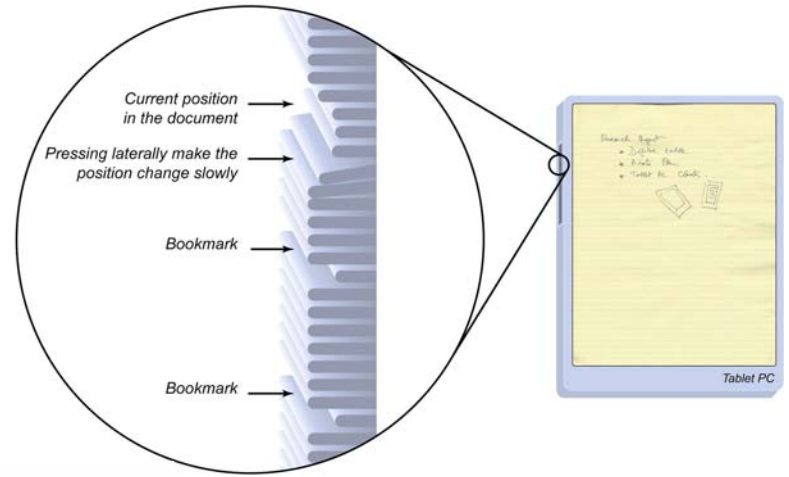
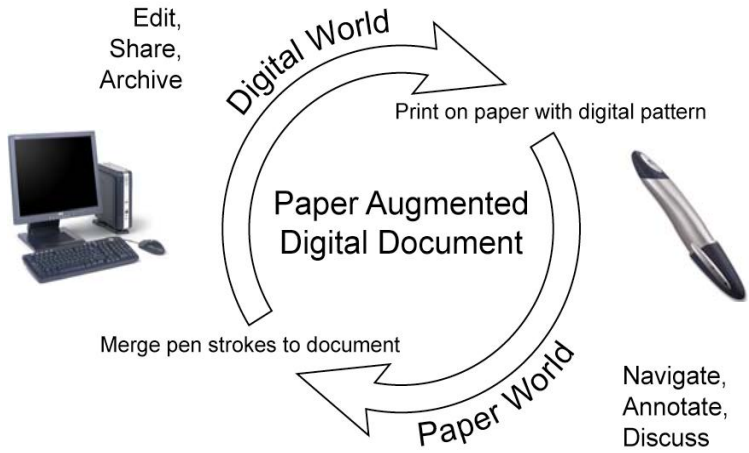
# My research interests

- Human Computer Interaction
  - People, Paper and Computer
  - Better interaction techniques and command mechanisms
- Information Visualization
  - How to study very large trees
- Let me know if you are interested in participating in research project

# People, Paper and Computers

How can we narrow the bridge between paper and computer?





# PADD

Edit,  
Share,  
Archive

Digital World

Print on paper with digital pattern

Paper Augmented  
Digital Document



Merge pen strokes to document

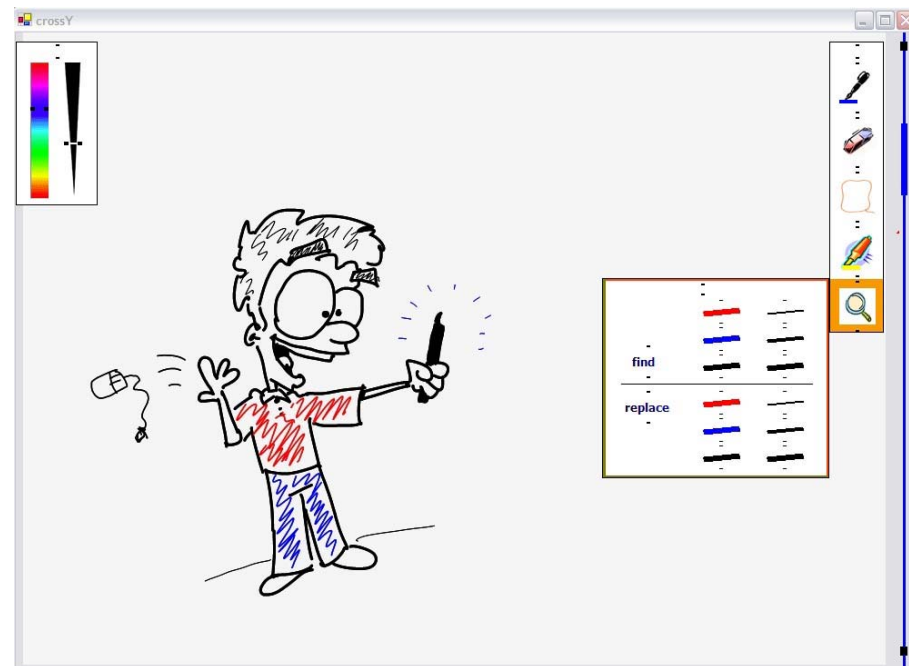
Paper World

Navigate,  
Annotate,  
Discuss



# CrossY

- Tool to explore crossing based interfaces



# Computer interaction today



- fixed environment, stable
- indirect interaction
- precise aiming easy

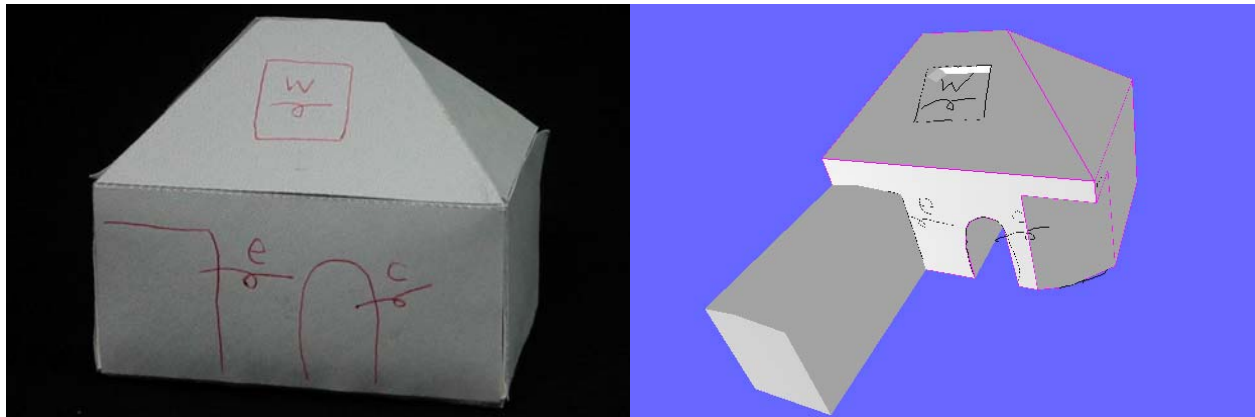
# Soon on your lap



- portable, unstable environment
- direct interaction
- low precision aiming

# Rapid prototyping and hardware design

- Lab:
  - 3D printer: Z corp Z310
  - Laser cutter (~mid-March)
  - Testing equipment (~mid March)
- Research project
  - 3D annotations and editions



# Student info

- Name, e-mail
- Are you taking the class for credit?
- Why are you taking the class?
  - Goals
  - Topics you would like to be covered in the class
- Do you own (or have access to)
  - A car radio, a cell phone, a MP3 player, a remote control
  - A digital camera
  - Clicker
- Additional comments

**HCI**

Human – Computer – Interaction

# HCI

## Human – Computer – Interaction

ACM definition:

*A discipline concerned with the*

*design,*

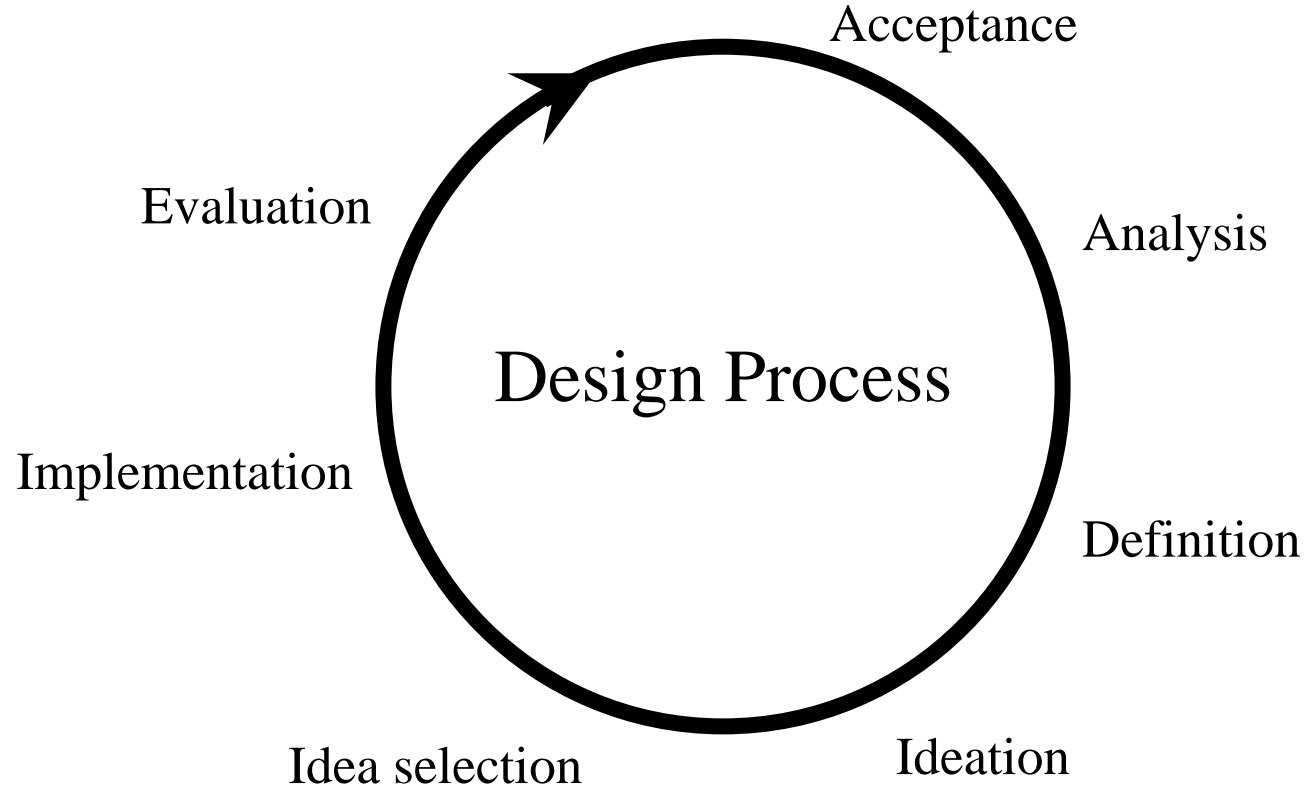
*implementation, and*

*evaluation*

*of interactive computing systems for human use.*

# PCD?

- People – Computer – Design (Winograd)
- “The universal traveler” (Koberg & Bagnall)



# What you will learn

- Basic human factors
  - Characteristic of the human information processor
- Basic interface technology
  - Hardware
  - Software
- Principle of design
  - How to identify needs
  - How to create/imagine possible solutions
  - How to select and implement a solution
  - How to evaluate the result

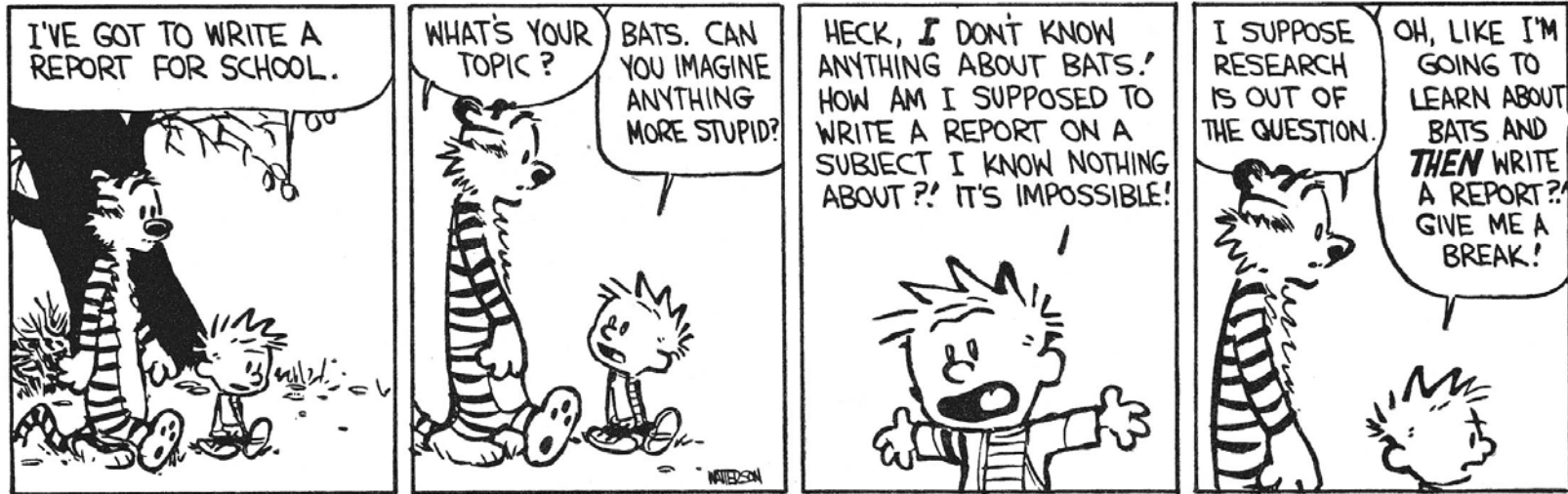
# Text and additional references

- Book
  - Universal Principles of Design, Lidwell, Holden and Butler [Rockport], 1998.
- Reader
  - Online with link from the web page
  - Password: **xxxxxxxx**
- Course web sites:
  - <http://www.cs.umd.edu/class/spring2006/cmsc434/>

# Work load

- Reading
  - A chapter a class
- Homework
  - 8 homework (~1 week each)
  - By yourself
- Projects
  - 1 projects, 4 phases (3 weeks each)
  - In groups of 3-4 people
  - Deadline to pick your project: 02/03/05
- Late assignments policy
  - -20% up to 24 hours late
  - -50% up to 48 hours late
  - -100% after that

# Work load



# How you will be evaluated

- Homeworks (20%)
- Projects (40%)
  - Step 1-4, 10% each
- Exams (30%)
  - mid-term (10%)
  - final (20%)
- Class Participation (10%)

*You must pass both exam components  
and  
project components to pass the course*

# Academic honesty

- Projects are group assignments
  - Each member should carry his/her load
  - Discussing with other group in general term is OK
  - Copying (verbatim or not) is not
- Homeworks are individual assignments
  - Discussing with other students in general term is OK
  - Copying (verbatim or not) is not
- Exams are individual works
  - No communication at all between students
- Violation of course (or University academic honesty) rules
  - Hearing with the judicial program

# **Human versus Machine**

Human traits    Computer traits

# Human versus Machine

Human traits	Computer traits
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Incredibly slow	Incredibly fast
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Error-prone	Error free
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Irrational	Deterministic
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Emotional	Apathetic
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Inferential	Literal
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Random	Sequential
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Unpredictable	Predictable
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Ethical	Amoral
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Intelligent	Stupid
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(from *The Inmates are running the asylum* by Alan Cooper)

# Reading for Next Week

- Psychopathology of everyday things
- The perfect brainstorm