

# IS4300: HCI

Professor Sylvan

# Today we will

- Go through the elements of this class
- Get to know one another a little bit
- Get introduced to the basics of HCI

# Course web site

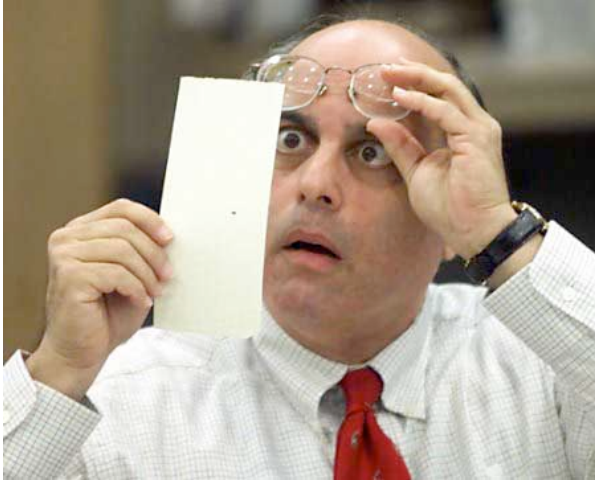
<http://www.ccs.neu.edu/course/is4300sp13>

# Getting to know each other

- Get into groups of 3
- Each of you introduce yourselves and answer the following questions (10 minutes)
  - What coops have you done or what other jobs have you had? Where? And what kinds of jobs have you had in the past?”
  - What did you learn in one (or more) of these jobs?
- Each member of the group introduce another member to the class

**WHY CARE?**

# An interface issue



The ballot information was very confusing. It was hard to know whom I was voting for, the way the ballot was printed. I did not know whether I was voting for my choice, Al Gore, or for Pat Buchanan. That was very scary and upsetting. I had to take the ballot out a couple of times and place it back again to be sure that the arrows pointed to the right hole. Even after the third try, I was not sure whom I was voting for and that makes me very mad.

-letter to the editor, Palm Beach Post  
November 2000

OFFICIAL BALLOT, GENERAL ELECTION  
PALM BEACH COUNTY, FLORIDA  
NOVEMBER 7, 2000

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<p><b>ELECTORS FOR PRESIDENT AND VICE PRESIDENT</b></p> <p>(A vote for the candidates will actually be a vote for their electors.)</p> <p>(Vote for Group)</p>	(REPUBLICAN)	3 →
	GEORGE W. BUSH - PRESIDENT DICK CHENEY - VICE PRESIDENT	
	(DEMOCRATIC)	5 →
	AL GORE - PRESIDENT JOE LIEBERMAN - VICE PRESIDENT	
	(LIBERTARIAN)	7 →
	HARRY BROWNE - PRESIDENT ART OLIVIER - VICE PRESIDENT	
	(GREEN)	9 →
RALPH NADER - PRESIDENT WINONA LaDUKE - VICE PRESIDENT		
(SOCIALIST WORKERS)	11 →	
JAMES HARRIS - PRESIDENT MARGARET TROWE - VICE PRESIDENT		
(NATURAL LAW)	13 →	
JOHN HAGELIN - PRESIDENT NAT GOLDHABER - VICE PRESIDENT		

OFFICIAL BALLOT, GENERAL ELECTION  
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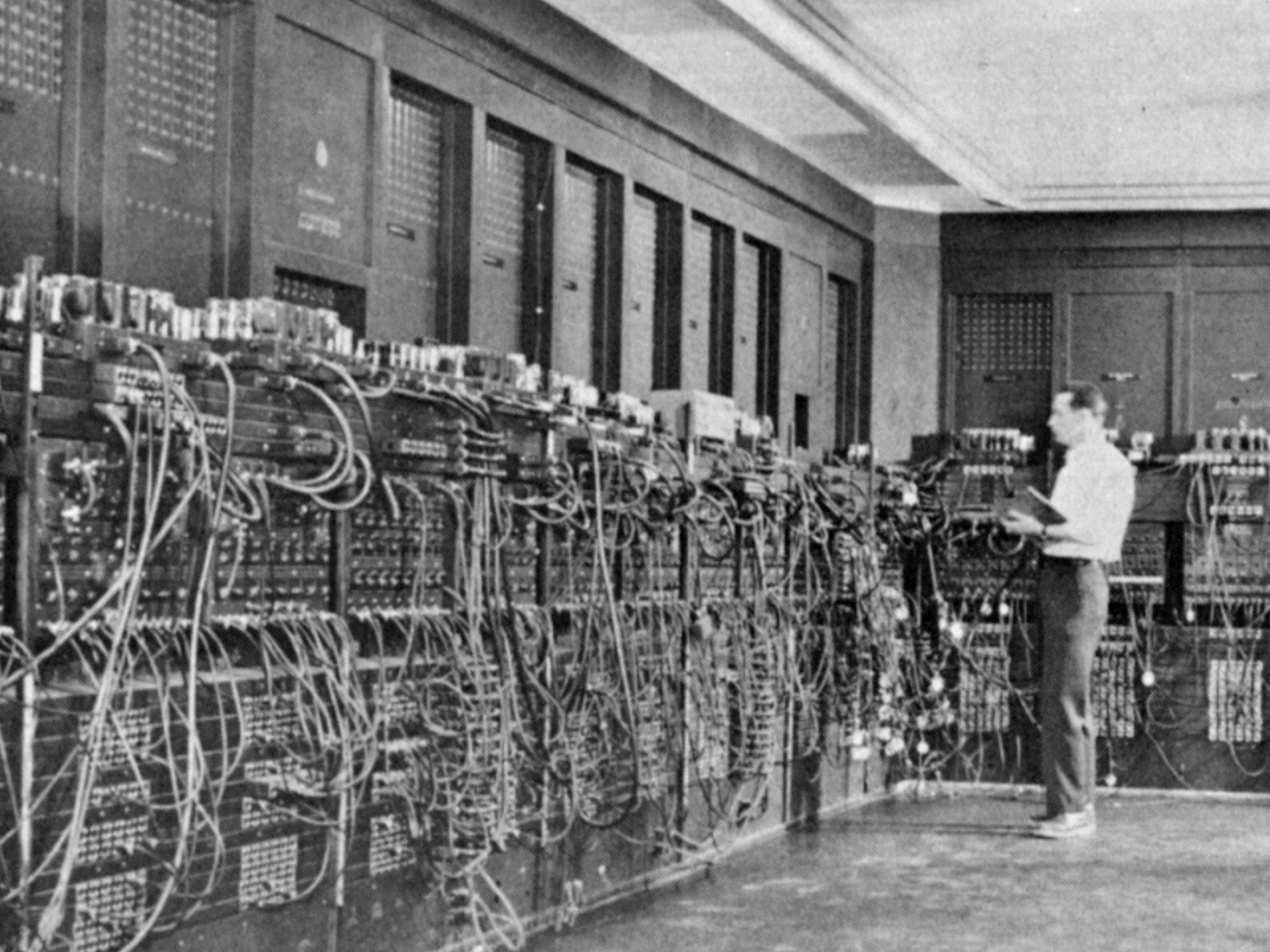
← 4	(REFORM)	
	PAT BUCHANAN - PRESIDENT EZOLA FOSTER - VICE PRESIDENT	
← 6	(SOCIALIST)	
	DAVID McREYNOLDS - PRESIDENT MARY CAL HOLLIS - VICE PRESIDENT	
← 8	(CONSTITUTION)	
	HOWARD PHILLIPS - PRESIDENT J. CURTIS FRAZIER - VICE PRESIDENT	
← 10	(WORKERS WORLD)	
	MONICA MODREHEAD - PRESIDENT GLORIA La RIVA - VICE PRESIDENT	
	<b>WRITE-IN CANDIDATE</b>	
	To vote for a write-in candidate, follow the directions on the long stub of your ballot card.	

TURN PAGE TO CONTINUE VOTING →

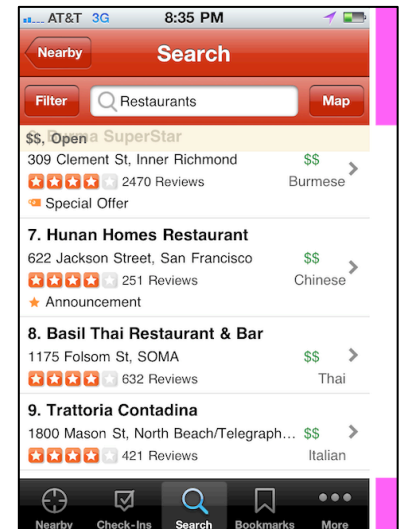
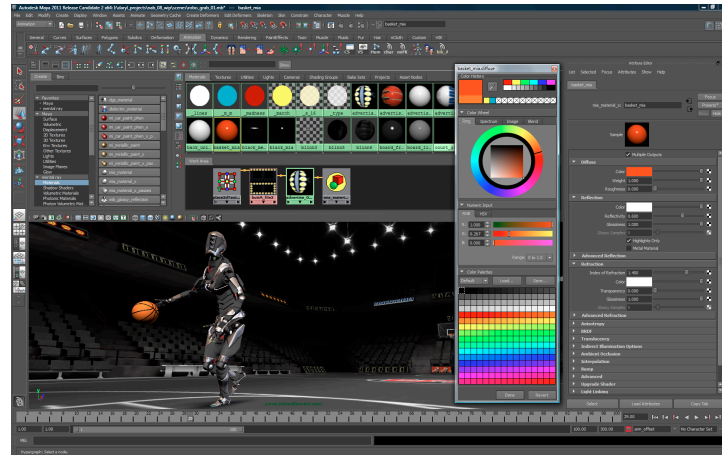
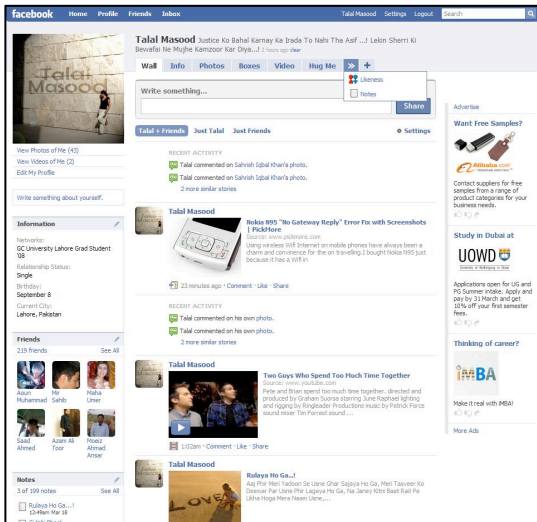
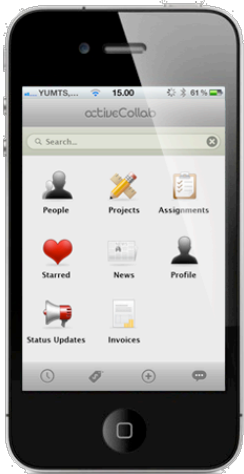
**Lesson 1:**  
The interface matters. A lot.



**WHAT ARE USER INTERFACES?**





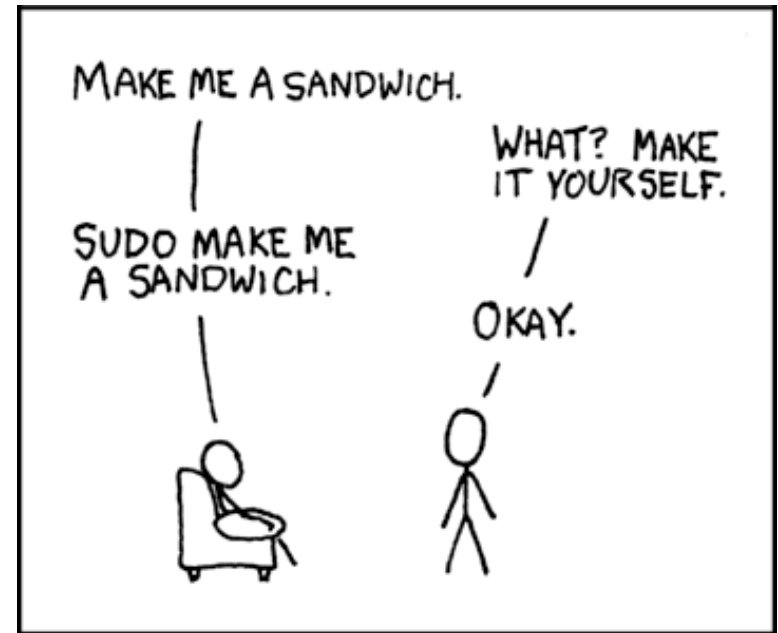


# *What are user interfaces?*

They help users interact with programs.

Users employ programs to perform and interact with tasks.

They should not reflect the structure of the underlying program, but the structure of the task domain and/or the task solution process. Users should not interact with the computer, but with their tasks.



They don't always do what you want.

# WHAT ABOUT THE HUMANS?

# Users are different

Tasks

Cognitive and perceptual abilities

Personality differences

Cultural differences

Disabilities

Age

# Usage environments are different

Work environments

Hardware platforms

Software

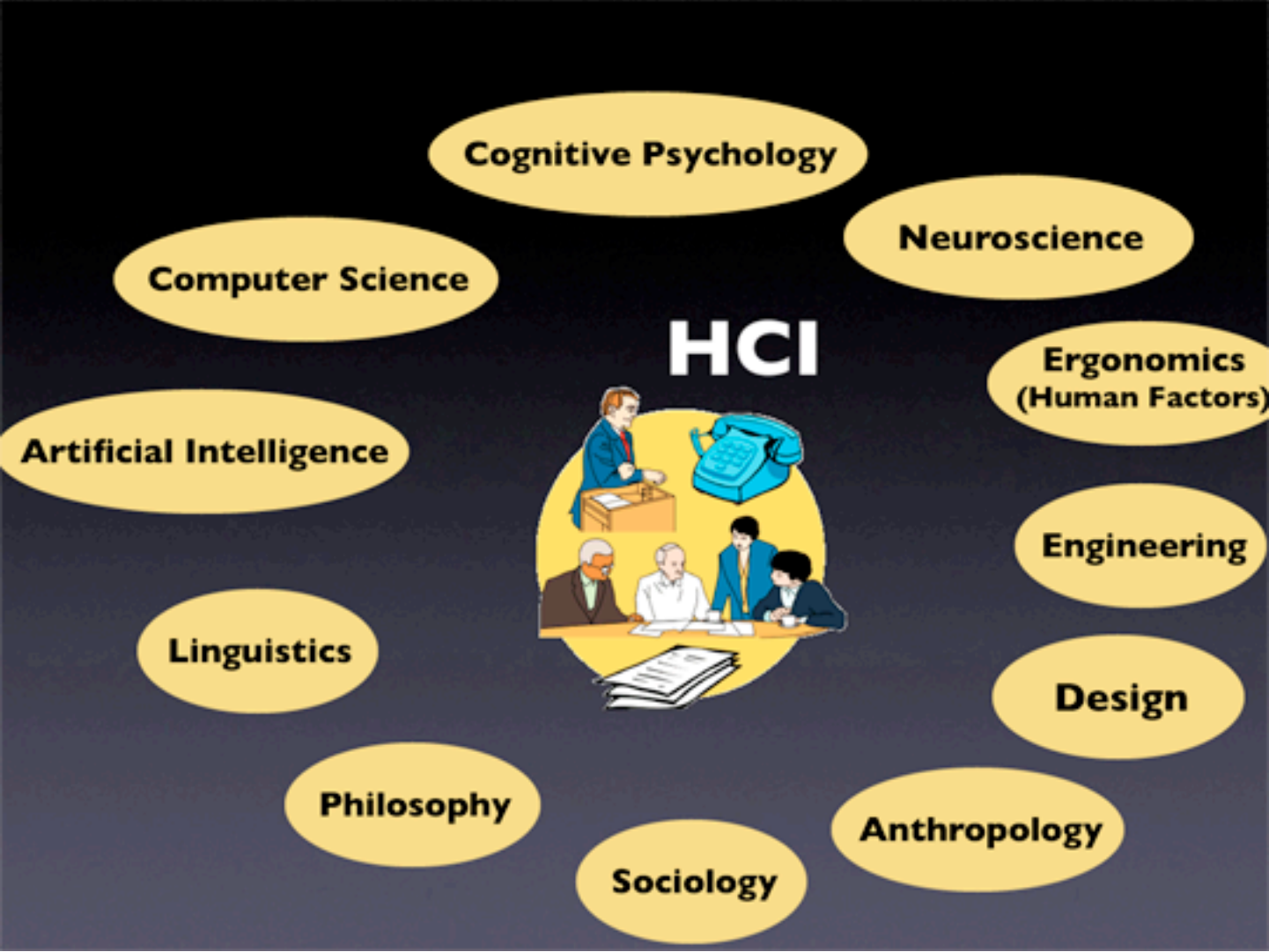


Lesson 2:  
You  $\neq$  your user

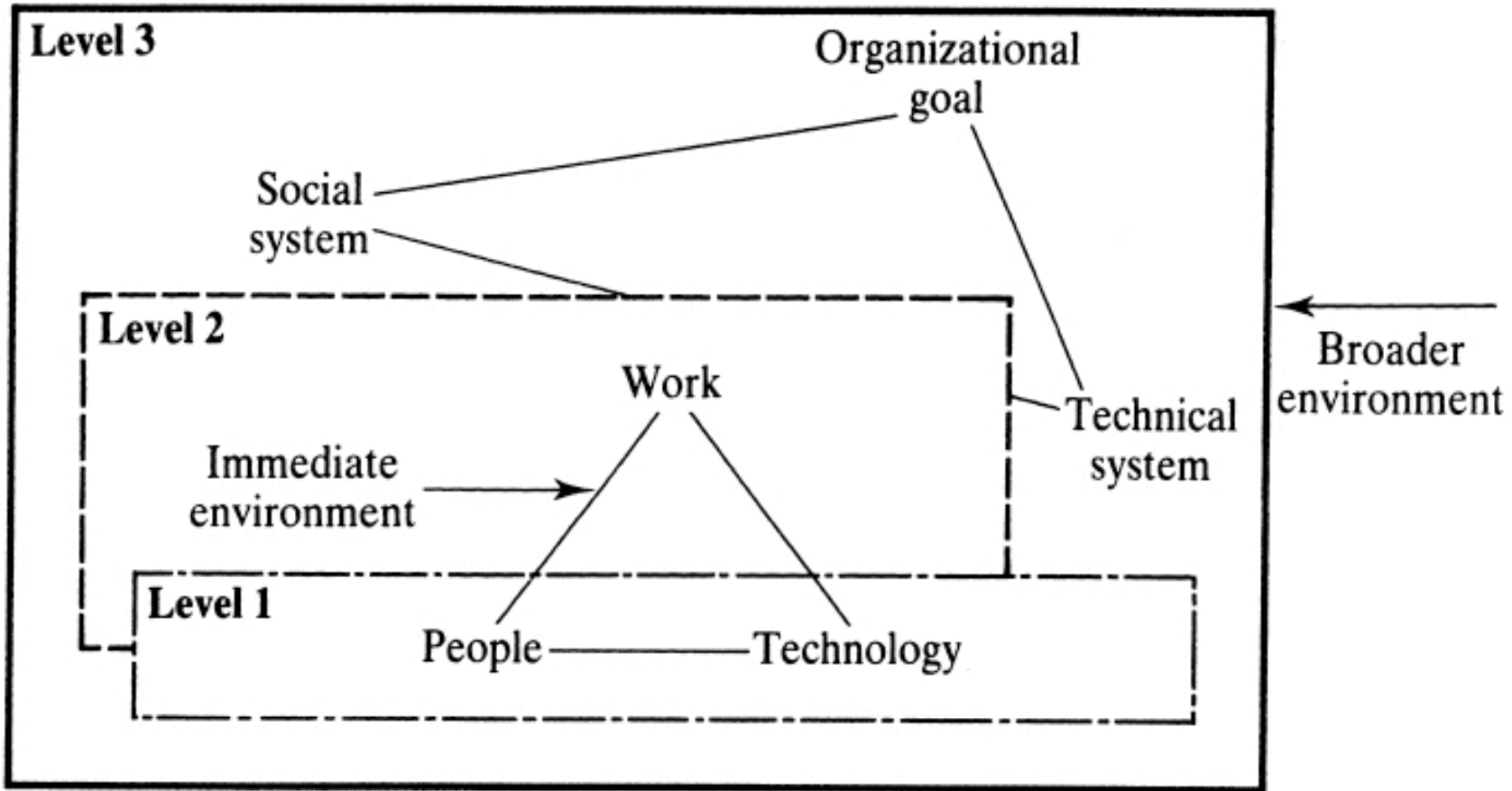
**WHAT IS HCI?**

# SIGCHI definition (from your readings)

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.



### Levels of analysis in HCI

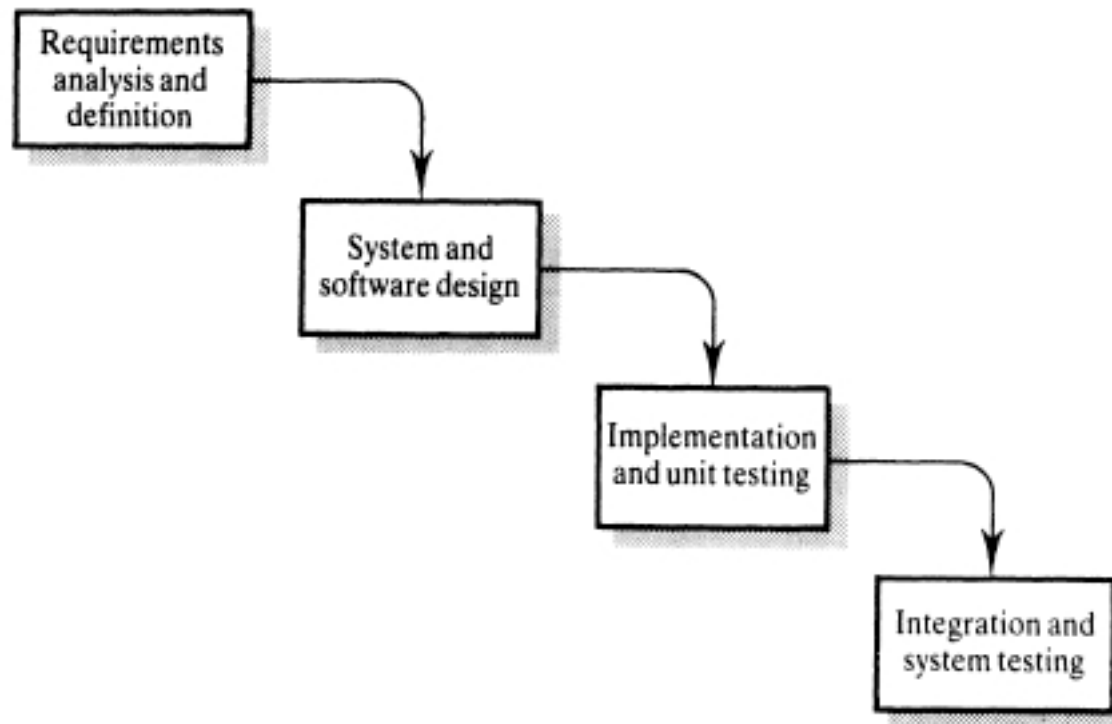


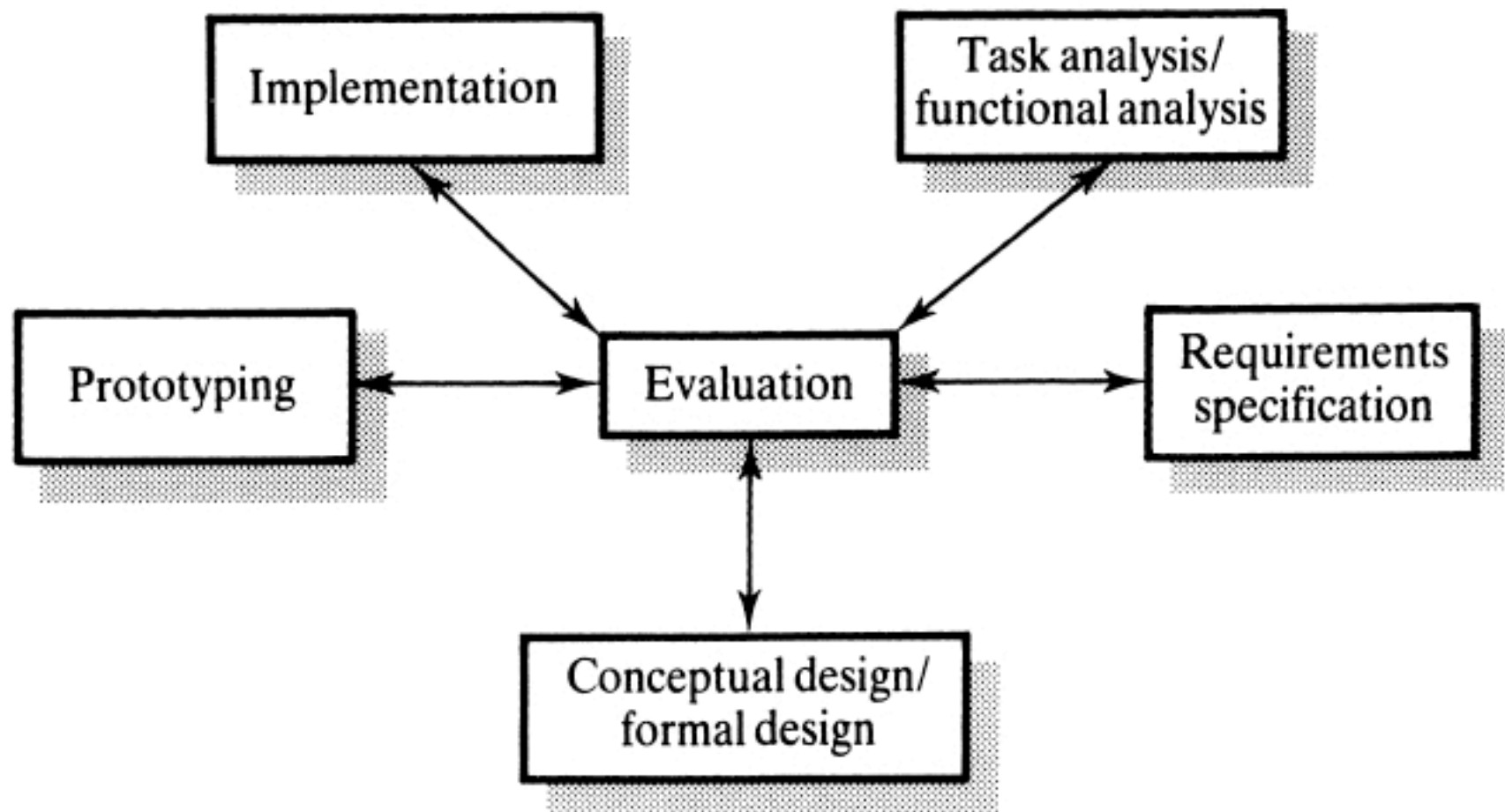
**Figure 2.4** A model of HCI (adapted from Eason, 1991).

<b>ORGANIZATIONAL FACTORS</b> training, job design, politics, roles, work organization		<b>ENVIRONMENTAL FACTORS</b> noise, heating, lighting, ventilation	
<b>HEALTH AND SAFETY FACTORS</b> stress, headaches, musculo-skeletal disorders	cognitive processes and capabilities <b>THE USER</b> motivation, enjoyment, satisfaction, personality, experience level		<b>COMFORT FACTORS</b> seating, equipment layout
<b>USER INTERFACE</b> input devices, output displays, dialogue structures, use of colour, icons, commands, graphics, natural language, 3-D, user support materials, multi-media			
<b>TASK FACTORS</b> easy, complex, novel, task allocation, repetitive, monitoring, skills, components			
<b>CONSTRAINTS</b> costs, timescales, budgets, staff, equipment, building structure			
<b>SYSTEM FUNCTIONALITY</b> hardware, software, application			
<b>PRODUCTIVITY FACTORS</b> increase output, increase quality, decrease costs, decrease errors, decrease labour requirements, decrease production time, increase creative and innovative ideas leading to new products			

Factors in HCI.

# The classic software life cycle





The star life cycle (adapted from Hix and Hartson, 1993).



# For Thursday

- Read the readings and write up reading questions. If your web site isn't ready for prime time yet, email it to me. But be sure to post it on your site later for full credit.
- Get started on H1 and T1.