CS-399: INTRODUCTION TO HUMAN-COMPUTER INTERACTION

DD.MM.YY

INSTRUCTOR: Fred Agbo

OFFICE: TBD

Syllabus

Week 1

ANNOUNCEMENTS

- Welcome to CS xxx: intro to HCI
- Things to do:
  - Access the course webpage <here>
  - Read carefuly the course syllabus
  - Try to access the materials or contact me if you couldn’t
- Signup to the course communication page on Discord
  - You should have recieved a message from me otherwise, let me know.
- Homework is due on Sunday at 23:59

MY VITALS

NAME

Fred Agbo

OFFICE

TBD

HOW TO PASS THE COURSE

- Four components of the course- all play critical role in your overall grade
- Participation 10%
  - I will decide on your overall score for active participations when the course ends
  - Attend classes, ask/answer questions in class or use Discord, Email, to interact
- Homework 20%
- Projects 40%
  - Project carries the largest percentage of the course => more work ☺
  - Project presentation in group
  - Report reports & peer-review
- Final Exam 30%

MOTIVATIONS

- Computing devices are now pervasive amongst people and across the world, providing all manner of services and experiences.
- Computing power continues to double every 18 months or so (according to Moore's law), producing mobile devices that are more powerful now than the largest computers were even just a few years ago.
- In the twenty-first century, computing is truly ubiquitous, and interaction is increasingly through speech, touch and gesture rather than the keyboard etc.
- We now have Weiser's pads, tabs and boards in the form of phones and tablets in various sizes, large public screens and wearable computational devices such as the Apple Watch, Google Glass and various sports and health devices.
- They all have access to the Web and run different apps.
- A huge amount of data is stored, and there are billions of videos and photos.
- Everything is synchronized and stored in the 'cloud' (in reality the cloud is a network of vast data centres full of computers)

MOTIVATIONS

- Designing Interactive Systems is aimed at the next generation of user experience (UX)
- Interaction Design (ID) deal with the demands of twenty-first-century computing and the demands for improved user experience (UX)
- HCI brings different concepts together and apply evolved methods, guidelines, principles and standards to ensure that systems are easy to use and easy to learn.

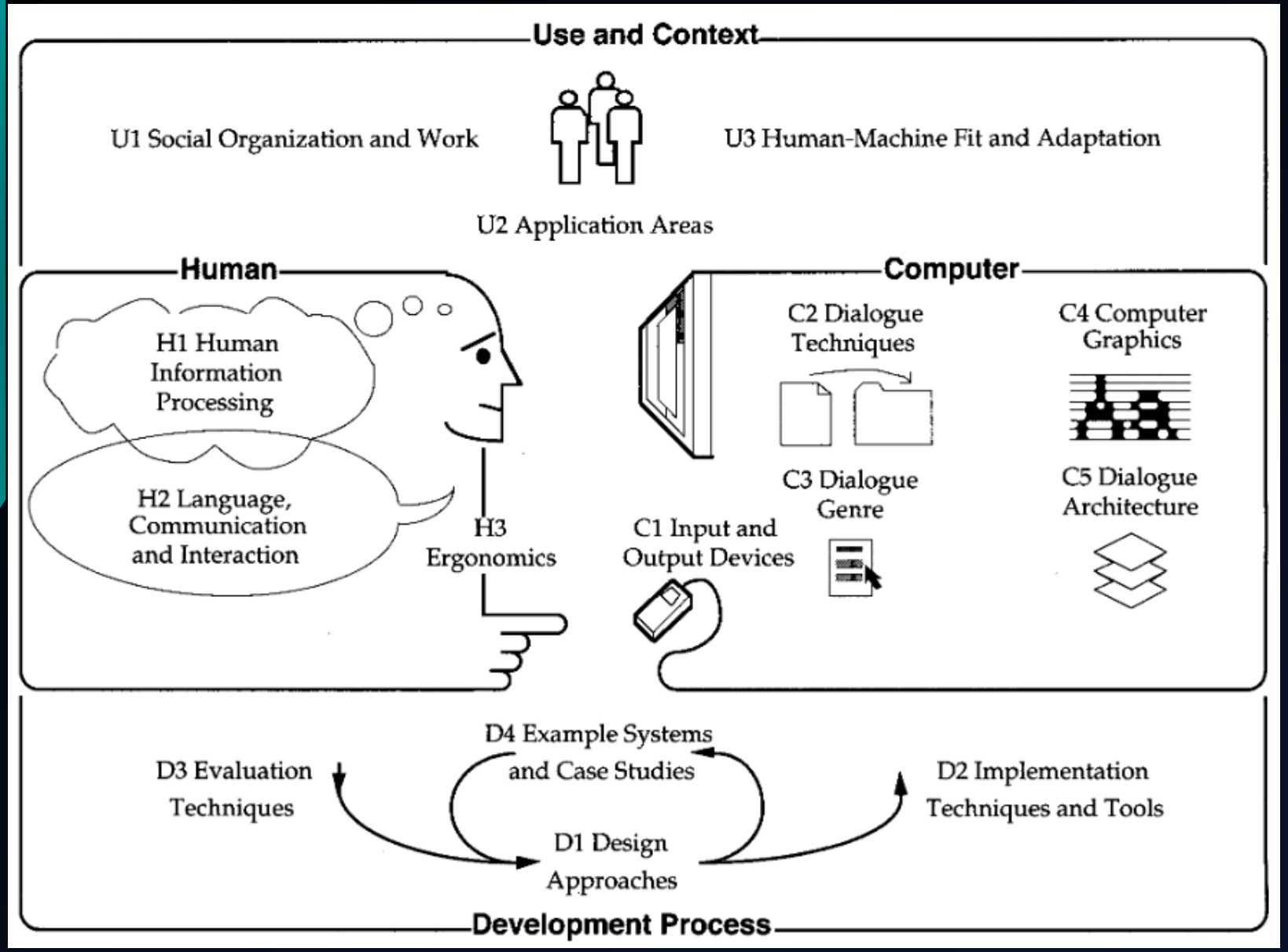
HCI: HOW DO WE GET HERE?

- Human–Computer Interaction (HCI) is a field that is human-centred in design.
- HCI arose during the early 1980s, evolving into a subject ‘concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them’ (ACM SIGCHI, 1992, https://dl.acm.org/doi/epdf/10.1145/2594128).
- HCI drew on cognitive psychology for its theoretical base and on software engineering for its design approach.
- During the 1990s, the closely related area of Computer Supported Cooperative Work (CSCW) focused on technology support for cooperative activities and brought with it another theoretical base that included sociology and anthropological methods.
- At the same time, designers in many different fields found that they had to deal with interactive products and components, and in 1989, the first computer-related design course was established at the Royal College of Art in London.

WHAT IS HCI?

"Human-computer interaction is a discipline concerned with the design, evaluation and implementation of inter- active computing systems for human use and with the study of major phenomena surrounding them" ACMSIGCHI Technical Report, 1992

WHAT IS HCI?



Overview of HCI

Source: ACMSIGCHI Technical Report, (1992) https://dl.acm.org/doi/epdf/10.1145/2594128

INTERDISCIPLINARITY OF HCI

- The Interdisciplinary Design Science of Human-Computer Interaction combines knowledge and methods associated with professionals including:
  - Psychologists (incl. Experimental, Educational, Social and Industrial Psychologists)
  - Computer Scientists
  - Instructional and Graphic Designers
  - Technical Writers
  - Human Factors and Ergonomics Experts
  - User experience designers
  - Anthropologists and Sociologists

WHY HCI?

- Already, new interfaces have become ubiquitous, pervasive, invisible, and embedded in the surrounding environment.
- Novel devices are becoming context-aware, attentive, and perceptive, sensing users' needs and providing feedback through ambient displays that glow, hum, change shape, or blow air.
- Recent innovations promote persuasive technologies that change users' behavior, multi-modal or gestural interfaces that facilitate use, and affective interfaces, respond to the user's emotional state, etc.

WHY HCI?

- UX designers: change people's lives:
  - doctors can make more accurate diagnoses;
  - pilots can fly airplanes more safely;
  - children can learn more effectively;
  - users with disabilities can lead more productive lives;
  - graphic artists can explore more creative possibilities.
  - Some changes, however, are disruptive:
  - reducing the need for telephone operators, typesetters, and travel agents
  - users battle excessively complex menus, incomprehensible terminology, or chaotic navigation paths.

WHY HCI?

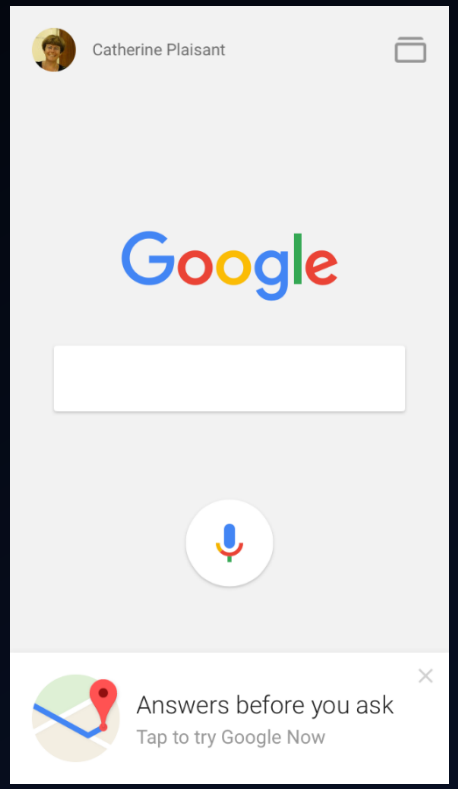
- Individual **User** Level
  - Routine processes: tax return preparation
  - Decision support: a doctor's diagnosis and treatment
  - Education and training: encyclopedias, drill-and-practice exercises, simulations
  - Leisure: music and sports information
  - User generated content: social networking web sites, photo and video share sites, user communities
  - Internet-enabled devices and communication

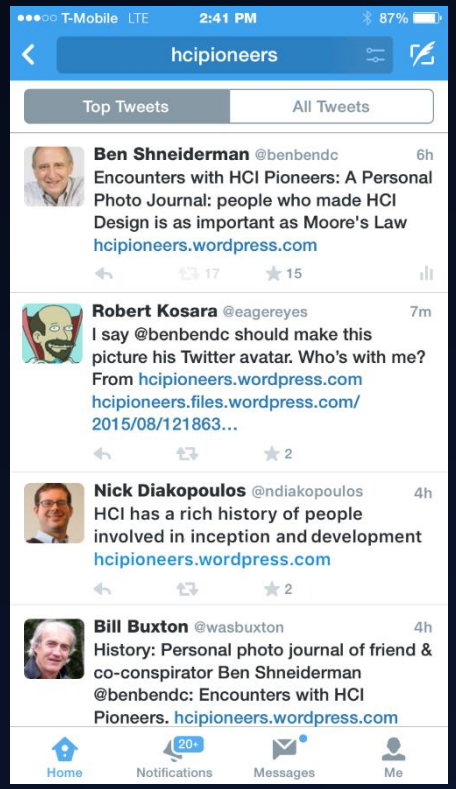
WHY HCI?

- Communities
  - Business use: financial planning, publishing applications
  - Industries and professions: web resources for journals, and career opportunities
  - Family use: entertainment, games and communication
  - Globalization: language and culture

INTERDISCIPLINARITY OF HCI CONT'D

- Smart phones have high quality displays, provide fast Internet connections, include many sensors and support a huge variety of applications





LET’S MEET IN THE NEXT CLASS!

Remember to read-up the text and keep every due date.