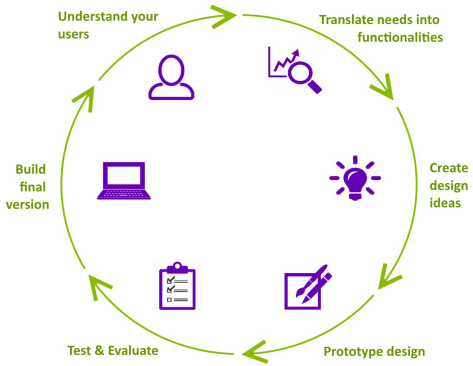
CS449/649:
Human-Computer Interaction

Spring 2019

Lecture XXV-XXVII

Anastasia Kuzminykh and Edward Lank

User Centered Design Process
May 6 - June 28



History of user centered design in HCI
July 2 - July 5

Academic HCI
July 8 - July 12

Special topics in HCI
July 15 - July 17

Course Review
July 19 - July 22

Presentation 2
July 24 - July 26

Last class
July 29

Academic HCI

Human-Computer Interaction -

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

Hewett; Baecker; Card; Carey; Gasen; Mantei; Perlman; Strong; Verplank. "ACM SIGCHI Curricula for Human-Computer Interaction". ACM SIGCHI.

Academic HCI

SIGSOC - ACM Special Interest Group on Social and Behavioral Computing

1969-1982

Greg Marks, Chair of the SIGSOC

Lorraine Borman, Editor of the SIGSOC Bulletin

Academic HCI

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Lorraine Borman, SIGSOC Bulletin, Spring 1978, Volume 9

Academic HCI

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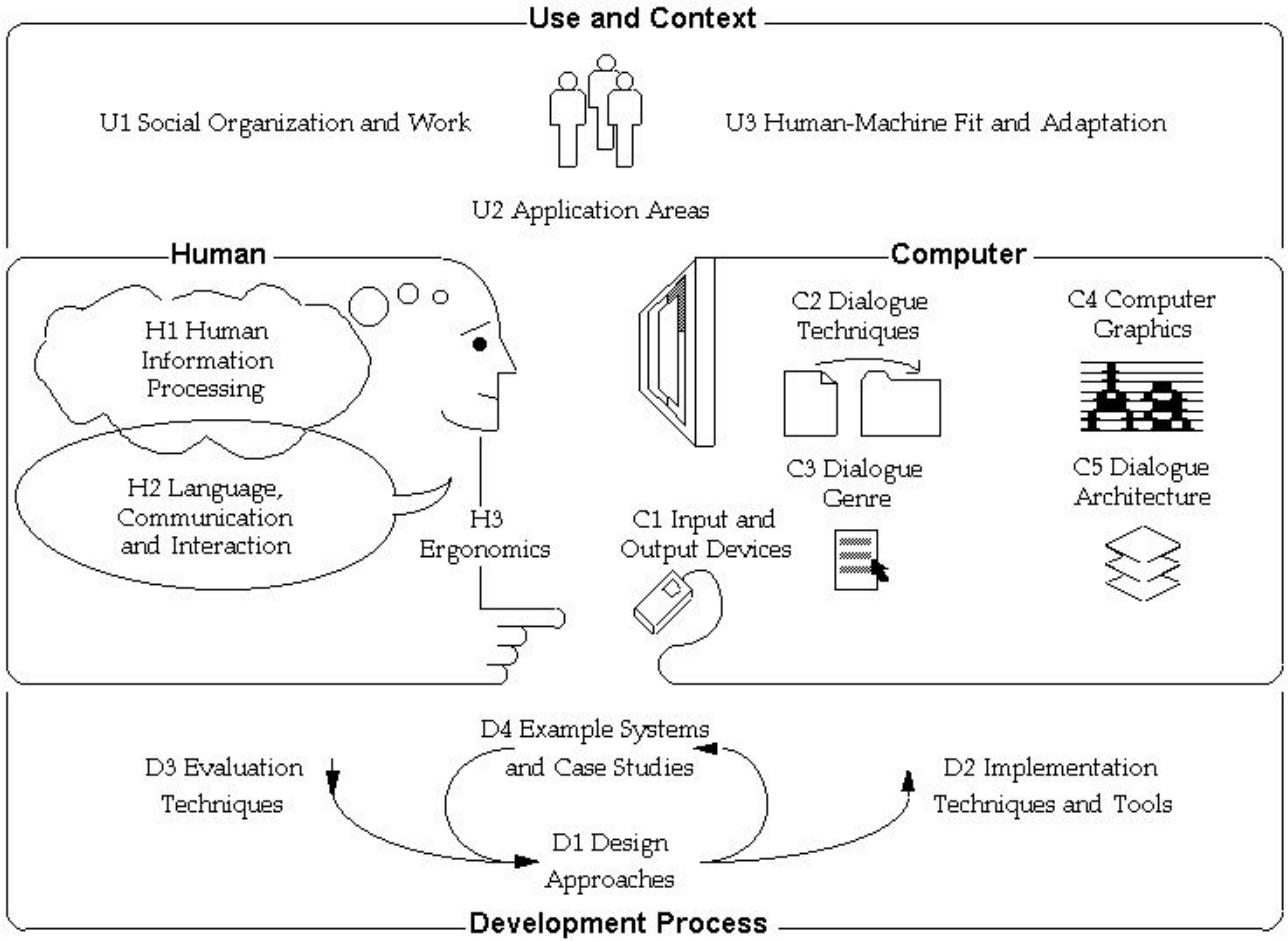

Hewett; Baecker; Card; Carey; Gasen; Mantei; Perlman; Strong; Verplank. "ACM SIGCHI Curricula for Human-Computer Interaction". ACM SIGCHI.

Academic HCI

Content of HCI field

Nature Of HCI	Use and Context of Computers	Human Characteristics	Computer System and Interface Architecture	Development Process
(Meta-)Models of HCI	Human Social Organization and Work	Human Information Processing	Input and Output Devices	Design Approaches
	Application Areas	Language, Interaction, Communication	Dialogue Techniques and Genre	Implementation Techniques
	Human-Machine Fit and Adaptation	Ergonomics	Dialogue Architecture	Evaluation Techniques

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Academic HCI

Some SIGCHI conferences

- CHI - Computer-Human Interaction
- UIST - User Interface Software and Technology
- CSCW - Computer Supported Cooperative Work
- IUI - Intelligent User Interfaces
- DIS - Designing Interactive Systems
- Ubicomp - Pervasive and Ubiquitous Computing
- MobileHCI - HCI with Mobile Devices and Services
- PerDis - The International Symposium on Pervasive Displays
- ICMI - International Conference on Multimodal Interaction
- CHIPlay - Computer-Human Interaction in Play
- GI - Graphics Interface
- TVX - Interactive Experiences for TV and Online Video

Academic HCI

Ubiquitous Computing -
Paradigm in which computing is made to appear anytime and everywhere, through distributed networked processing devices

Academic HCI

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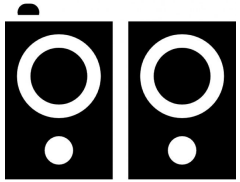
Weiser, Mark. "The computer for the 21st century." *Scientific american* 265.3 (1991): 94-104.

The most profound technologies are those that disappear into the background and become indistinguishable from the everyday environment

Academic HCI



Ubiquitous Computing -

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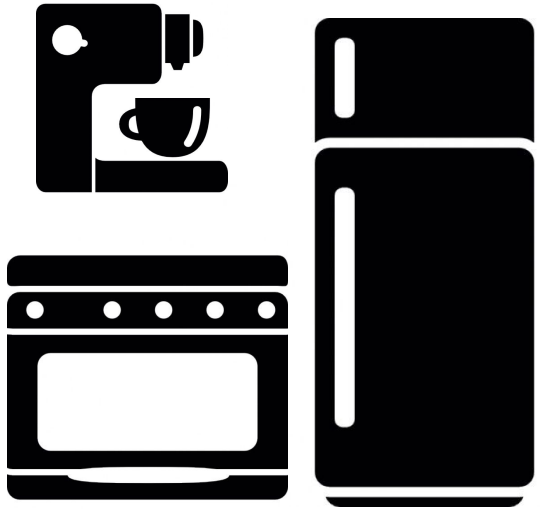

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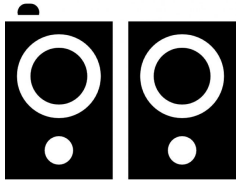

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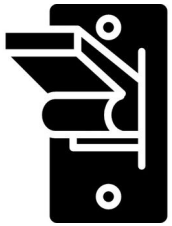

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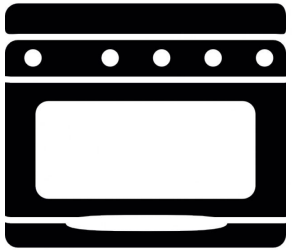
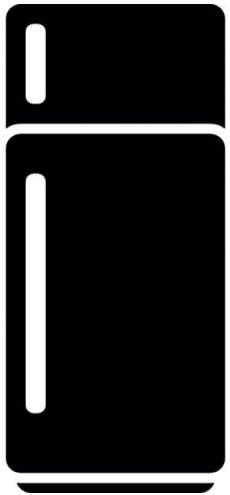
Two crucial issues: location and scale





Academic HCI

Computer-Supported Cooperative Work (CSCW) -

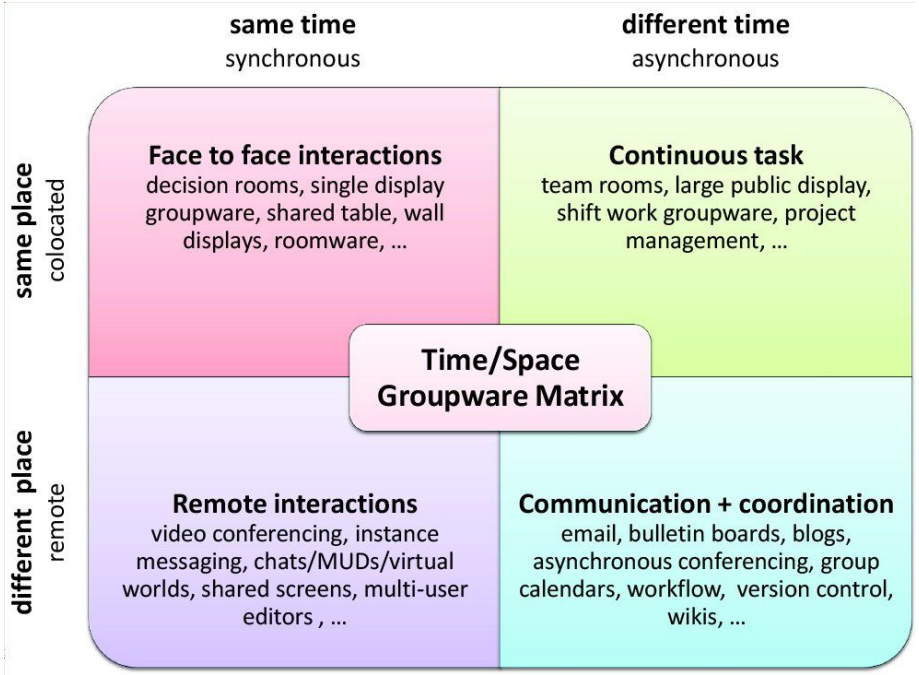
area concerned with understanding of the way people work in groups with the enabling technologies of computer networking, and associated hardware, software, services and techniques (Paul Wilson, 1991)

Term coined by Irene Greif and Paul Cashman in 1984

Irene Greif, Computer-Supported Cooperative Work: A Book of Readings. (1988)

Groupware - software designed to support collaborative activities and their coordination. Term coined by Trudy and Peter Johnson-Lenz, 1978-1981

Academic HCI



Johansen, R. Groupware: Computer Support for Business Teams, 1988

Academic HCI

	Real time	Asynchronous
Communication	• Telephone • Video conferencing • Instant messaging • Texting	• Email • Voice mail • Blogs • Social networking sites
Information sharing	• Whiteboards • Application sharing • Meeting facilitation • Virtual worlds	• Document repositories • Wikis • Web sites • Team workspaces
Coordination	• Floor control • Session management • Location tracking	• Workflow management • CASE tools • Project management • Calendar scheduling

From: J. Grudin, S. Poltrock, "Computer Supported Cooperative Work." The Encyclopedia of Human-Computer Interaction, 2nd Ed

Academic HCI

HCI for Development (HCI4D) -

area concerned with understanding the use and appropriate design of information and communication technologies (ICTs) in the context of developing regions

The first workshop on user-centered design and international development at CHI 2007 - Dearden, Andy, et al. "User centered design and international development." *Extended Abstracts on Human Factors in Computing Systems*. ACM, 2007.

Ho, Melissa R., et al. "Human-computer interaction for development: The past, present, and future." *Information Technologies & International Development* 5.4 (2009)

Kumar, Neha, et al. "Development consortium: HCI across borders." Extended Abstracts on Human Factors in Computing Systems. ACM, 2016.

CHI 2017 SIGCHI Social Impact Award: Indrani Medhi Thies - Designing for Low-Literate Users

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One Laptop Per Child (OLPC) project -

non-profit initiative to enable children in low-income countries to have access to content, media and computer-programming environments.
Nicholas Negroponte, Seymour Papert, Alan Kay and colleagues

1967 — Seymour Papert, et al. introduce Logo, the first programming language written especially for children

1968 — Alan Kay first describes proto-laptop, later called the Dynabook

1980 — S. Papert, "Children, Computers and Powerful Ideas", a guide to his theories of constructionism and computing for kids.

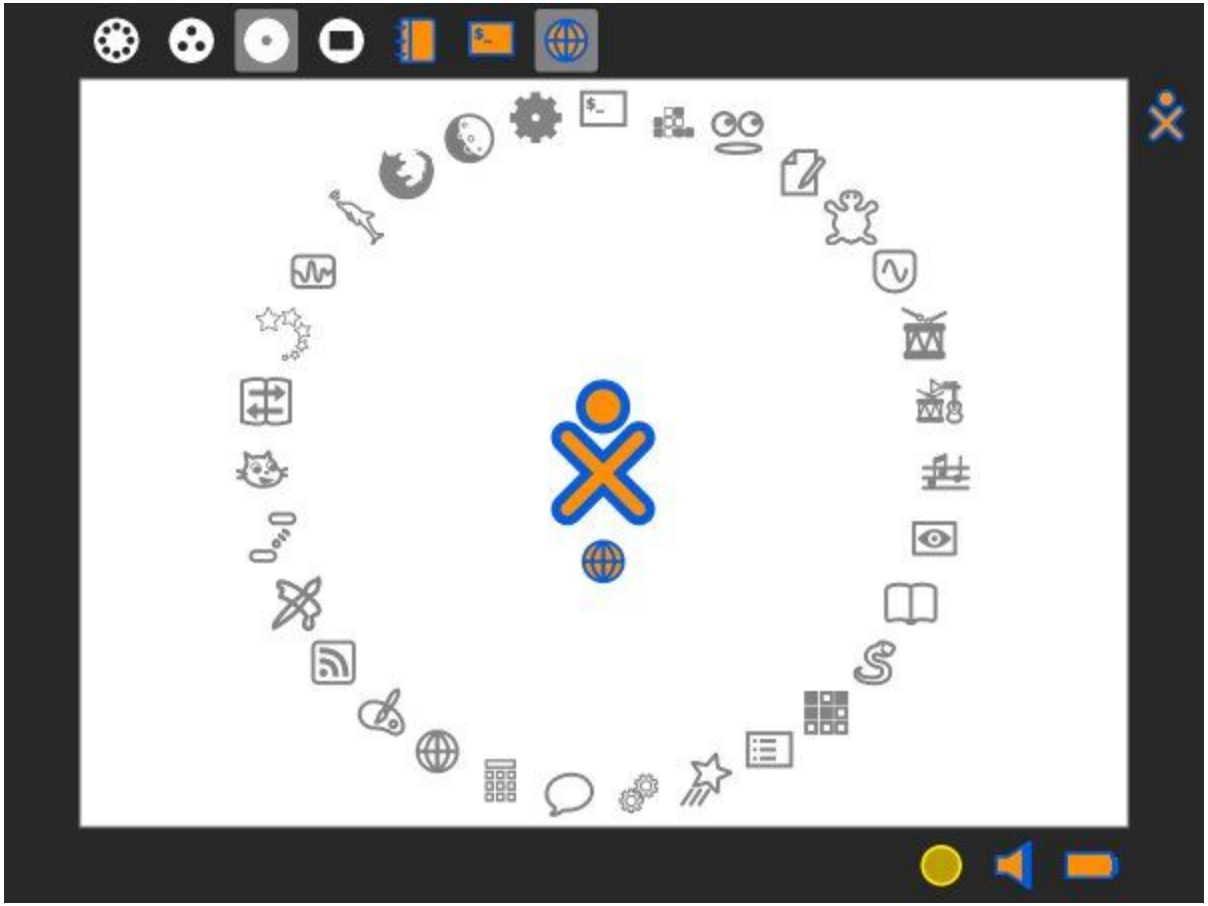
1982 — N. Negroponte & S. Papert distribute Apple II microcomputers to children in a suburb of Dakar, Senegal.

1988 — Constructionist program that includes the training of a dozen Costa Rican teachers at MIT

2002 — 20 children in a remote Cambodian village are provided with connected laptops

2005 — The idea and first prototypes of OLPC is presented

http://www.laptop.org/en/vision/project/index.shtml



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