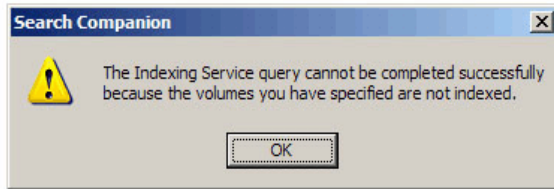


IFSM 303 Human Factors



"I love deadlines. I like the whooshing sound they make as they fly by."

- Douglas Adams

Topics

Exam

Reports

Collaboration



EXAM!

No Talking
Review after exam

1 Free
Right/Wrong



Software Demo

Meeting Costs

Meeting Costs Calculator

How much does this meeting cost?

Everyone estimate how much they earn per hour.

If you don't have a job, use minimum wage - about \$6.00 per hour.

Review of Exam

How did you do?

Results

Group 2

How did it go?

What went right?

What went wrong?

Results

Group 3

How did it go?

What went right?

What went wrong?

Project

Interface Design

Interface Design

Design the interface for one of the projects.

Doesn't have to work - but should simulate working.

Do you want new teams?
Current Teams?

Project Process

Follow the prototyping guidelines
Presentation / Evaluation
Paper Storyboard
Paper Prototypes
Wireframe
Lofi prototype
Hifi prototype

Document each step

What's Wrong with This?



HCI in the News



Device Assesses Brain Injury Risk in Sports

ARLINGTON, Va., April 27, 2005 -- Biomedical engineers have built a device to quickly detect mild traumatic brain injury in the heat of sports competition, on the battlefield, in the emergency room, and in other situations where time is of the essence.

On the football field or in the hockey rink, for instance, players with a mild concussion could suffer permanent brain damage or even death from a second hit. But competitors often resume play, and assume risk, after answering a few questions from the coach.

A clear diagnosis of mild traumatic brain injury usually requires a quiet room and an hour or more of testing, which is impossible in many situations.

Now a biomedical engineer and an expert in emergency medicine have collaborated on a portable device that can zero in on problems associated with concussions in about seven minutes in virtually any setting.

The device includes software, a portable computer, a video-game-type controller, earphones, and headgear with a video display. It blocks light and sound that could interfere with its operation.

People with mild brain injury will struggle with certain mental tasks that draw on different areas of the brain, such as working memory and complex reactions. DETECT's bank of neuropsychological tests is designed to assess performance of these brain functions.

Because DETECT is automated, it can be operated by a coach, parent, soldier or other layperson. It has been tested in the laboratory and in a hospital emergency room, and the researchers are hoping that the Georgia Tech football program will also give it a try.

HCI Video

Ergonomics

ABC 20/20

How far should government go?



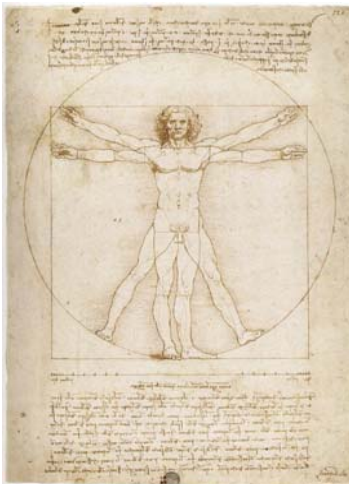
"No wonder your arm aches. Shackles should be placed at eye level. Man, it's an ergonomic nightmare down here."

In Class
ErgoEASER

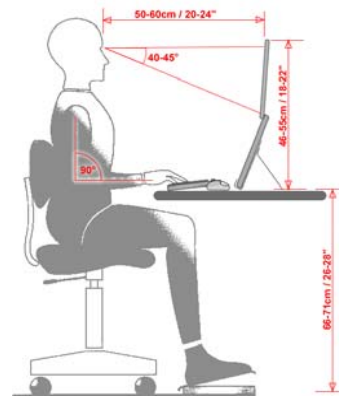
Ergonomics

There is not such thing as a "average" human.

Adjusting your workstation is critical to your health.



ErgoEASER



Teams of 2

One measure other enter

Check results

How can you correct?

Switch...

ErgoEASER

What did you like / not like?

What was missing?

What did you think?

What can you do for:
No money, little money?

Chapter 10

Collaboration

Goals of Cooperation

Focused partnerships.
 Lecture or demo.
 Conference.
 Structured word process.
 Meeting and decision support.
 Electronic commerce.
 Tele-democracy.
 Collaboratories.
 Telepresence.

Cooperative Space-Time Matrix

	<i>Same Time</i>	<i>Different Time</i>
<i>Same Place</i>	Classroom	Scheduling
<i>Different Place</i>	Electronic Conference	E-mail

Asynchronous Interactions

Different Place, Different Time

E-Mail: Text, Graphics, Voice

Bulletin Boards / Usenet / Listserv

Websites

File Transfer

Electronic mail

can be too loosely structured
 sometimes overwhelming
 transient
 tools

- filtering
- archiving
- mailing lists
- discussion groups

Electronic Mail

Typically text-only but increasingly includes other structured objects

- graphics
- sounds
- animations
- web pointers
- video

Voice mail

Electronic Mail

Making e-mail universal requires

- increased simplification
- improved training
- easier filtering
- lower-cost hardware
- lower-cost network services

In 2003, AOL reported 80% of email that entered its system was spam suppressed by filters

Online and networked communities

Group identity
 Patient support groups
 Impact on offline communities
 Community policies, freedom of speech
 Communities can be controversial

- hackers
- hate groups
- Para-military groups

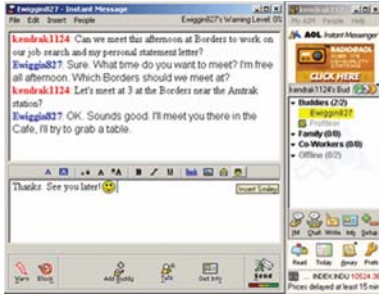
Distance education courses
 Reputation managers for online stores

Synchronous Distributed: Different Place, Same Time

- group editing
- shared screens for customer assistance
- give demonstrations
- simultaneously at multiple sites
- allow sharing of information for various applications

Distributed Applications

- interactive games
- CHAT, Internet Relay Chat (IRC), and TALK
- MUDs
- Whiteboard
- CU See Me
- ICQ



Video Conferencing

- slow response times
- distracting background audio
- difficulty: who is speaking?
- inadequate lighting
- difficulty in making eye contact
- changed social status
- small image size
- potential invasion of privacy
- need for convenient turn taking

Video Conferencing

Issues of ownership and control
private and public workspaces
identity of participants
location of actions
care with updating

Face to Face: Same Place, Same Time

Innovative approaches to work and learning include:

- Shared display from lecturer workstation
- Audience response units
- Text-submission workstations

Electronic Meeting Systems

Brainstorming, voting, and ranking

- broader input into the meeting
- reduces the chance that a few people dominate the meeting
- Anonymity allows free expression
- Process structure helps focus the group on key issues

Electronic Classrooms

- Run business simulations to increase product quality
- Perform psychological statistical analyses
- Compose computer programs
- Search the Internet

Problems: Training, Change

Problems with Online Communications

Loss of Senses

Reading Message

Your Mood, not their Mood

Flaming

Abuse

End of This Lesson