Welcome to the course

Advanced interaction design!

EAT & Certec
Department of Design Sciences, LTH
Who are we?

- Mattias Wallergård (EAT)
- Kirsten “Kirre” Rassmus-Gröhn (Certec)
- Björn Breidegard (Certec)
- Miguel Molina (Certec)
- Charlotte Magnusson (Certec)
- Eric Fransson (LTH/RIM)
- Kristoffer Jaworska Persson (Ericsson)
Människans samspel med tekniska system

Kognition

Människa-datorinteraktion

Användbarhets-utvärdering

Virtual Reality i teori & praktik

Avancerad interaktionsdesign

Interaktion 1: neuromodellering, kognitiv robotik & agenter

Interaktion 2: virtualitet & kognitiv modellering
The purpose of the course

The student shall acquire deep knowledge on advanced interaction with new types of information and communication technology, such as mobile products, embedded systems and new types of media. With other words: *interaction beyond the traditional screen, mouse and keyboard.*
Focus: mobile interaction
Schedule for today

1. Structure of the course

2. Competitions
   - HaptiMap
   - Ericsson Application Awards

3. Coffee

4. The practicalities
The structure of the course
Kolb’s learning cycle

Bloom’s taxonomy

- Remember
- Understand
- Apply
- Evaluate
- Analyze
- Create

Lectures

• Theoretical deepening
• Practical information and suggestions
Lectures

1. Beyond the screen – new interaction possibilities
2. To program Android
3. Presentation of two application areas
4. Augmented reality
5. Sound design
6. Design of innovative interaction concepts at TAT/RIM
The project

• Your task is to *design and implement a vertical prototype of an interaction concept* in a user-centered design process
For an approved course

• Participation at compulsory lessons
  – Introduction
  – Discussion about project ideas
  – Work-in-progress
  – Project presentation

• Participation at lectures (at least 4 of 6 lectures)

• Approved project
The project
Platform: Android
Why Android?

• You have already knowledge about
  – Java
  – Eclipse
What this course is really about

• This is not a course in Android programming!
• Focus on *advanced interaction*
• You will explore the interaction possibilities offered by a modern smart phone
  – GPS
  – Compass
  – Accelerometer
  – Touch screen
  – Camera
  – Bluetooth
  – Etc.
Organisation of the project

- Four persons in each project group
- Project supervision once a week
- Equipment
  - Computer at IKDC
  - Google Nexus One
What does “a vertical prototype” mean?

Prototype

Ready product
Earlier projects
VisioAid

- Mobile phone UI for people with sight impairments
ABC Writing Tutor

• Helps children learn to write letters
LTHAR

- Gesture-based
  Augmented reality UI
Common for these three projects

• They explore the interaction possibilities
• User-centered design process
• One or several features possible to demonstrate (vertical prototype)
The user-centered design process
You will…

• Apply design method and design techniques that you learned in earlier courses
• Apply design techniques from the book *User Study Guidelines*
• Use the Context Cards developed in the project HaptiMap
• Motivate and reflect over
  – the design methods and techniques you choose
  – the design decisions you make during supervision and in your project report
Project schedule

1. Discussion about the ideas of the project groups
2. Supervision 1
3. Supervision 2
4. Work-in-progress presentations
5. Supervision 3
6. Supervision 4
7. Supervision 5
8. Project presentations

(Italics and bold = compulsory lesson)
For an approved project

- Project report
- YouTube film clip
- Individual reflection over
  - your own achievement
  - the achievements of your fellow group members

... more details on this later on.
Grades

- Not approved, 3, 4, 5
- Based on the project
- A non-approved project can be complemented
Industry involvement

ERICSSON

tat THE ASTONISHING TRIBE

Do-Fi
Competitions

HaptiMap

ERICSSON APPLICATION AWARDS
The practicalities
Project groups

• Four persons per group

• Write your names on the lists on the bulletin board on the 5th floor, IKDC

• Come up with a nice name for your project group
Computer room 1

• Four computers in the master thesis room 5th floor, IKDC

(They are not yet completely ready!)
Computer room 2

- Five computers in the Virtual Reality Lab, IKDC basement (1st floor)
Computer room 2

- We are currently running experiments in the Virtual Reality Lab

- If the experiment sign is up, please:
  - open the door carefully
  - be quite when entering the lab
At home

• Of course, we recommend you to install Eclipse and the Android tools also at home!
Developer phones

• We have five Nexus One

• You can also use your own Android phone (if it is not too old)

• After this lesson you can sign up for a Nexus One
Reference library

- The master thesis room on the 5th floor, IKDC
- The books may not leave the room!
Access card and computer account

- The reception, IKDC
- The people in the reception have a list with course participants
- 100 SEK in deposition fee
Advanced interaction design MAMN01

The course Advanced interaction design aims at providing knowledge about interaction with new types of information and communication technology. Another purpose is that the students will learn to handle a new technology platform while at the same time dealing with a user-centered design process. 2011 the course will focus on the platform Android.

http://www.eat.lth.se/utbildning/interaktionsdesign/advanced_interaction_design_mamn01/
Help with Android

1. Try yourself!
2. Google-is-your-friend
3. Ask our Android expert Migule Molina
   miguel.molina@certec.lth.se

Room 522, 5th floor, IKDC
You have to build on what others already have done!

- HaptiMap toolkit

- Ericsson Labs API’s
Help documents

• Developing Android applications in Windows
  – How to install Eclipse, Android tools & SVN
  – Getting started with SVN
  – Links to
    • ”Hello world”
    • Connecting your device

• HapticGuide tutorial
  – Tutorial for saving a GPS location and then guiding the user back to this location
SVN server

• Contact Miguel Molina (miguel.molina@certec.lth.se)
Schedule for project start-up

1. Run “Hello world” on Android phone
   • So that you get the maximum out of the lecture “To program Android”
   • Deadline Oct 26, 11.59 p.m.

2. Run the *HapticGuide tutorial*
   • To get acquainted with a simple GPS application

3. Formulate a) idea for an Android project b) project plan
   • Deadline Nov 1, 11.59 p.m.
   • Mail to all teachers
Work organisation

- **ALL GROUP MEMBERS** must participate in both the programming and the design!

- This is a golden opportunity to learn some Android!

- Your programming skills are better than you think

- Remember: You will have to write an individual reflection over your own achievement and the achievements of your fellow group members
Questions?