Faculty of Computer Science and Media Technology

IMT2551 - Mobile System Fundamentals (5SP)

7. Introduction project 2 - Data collection with mobile systems

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20110314

Where are we now?

1	-
2	Introduction
3	General background on modern mobile devices
4	User Interface Design for smalls screens - Guest lecturer Eivind Johansen
5	Design and development of m.hig.no - Guest lecturer Kent Are Andersen
6	-
7	A brief introduction to HTML 5 and CSS3
8	Project 1 - Develop web-pages for small screens
9	Javascript for mobile web developers, including the use of sensors - Guest lecturer Jayson Mackie
10	Project 1 - Develop web-pages for small screens
11	Lecture - Introduction of Project 2
12	Project 2 - Innsamling av data med mobile systemer
13	Project 2 - Innsamling av data med mobile systemer
14	Project 2 - Innsamling av data med mobile systemer
15	Project 2 - Innsamling av data med mobile systemer
16	Easter holiday
17	Project 3 - Sum up experiences - mobile websites and data collection with mobile systems
18	Project 3 - Sum up experiences - mobile websites and data collection with mobile systems
19	Project 3 - Sum up experiences - mobile websites and data collection with mobile systems
20	Project 3 - Sum up experiences - mobile websites and data collection with mobile systems
21	Project 3 - Sum up experiences - mobile websites and data collection with mobile systems
22	Reading week
23	Final exam (June 10, 2011)

The goal this week

- Prepare you for the project work ahead where you all participate in designing, building, testing and launching a mobile system that collects data outside.

Mobile sites?

- Experiences, comments, ideas?

Data collection with mobile systems

Goal

Overall goal

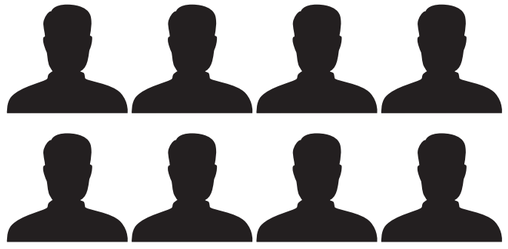
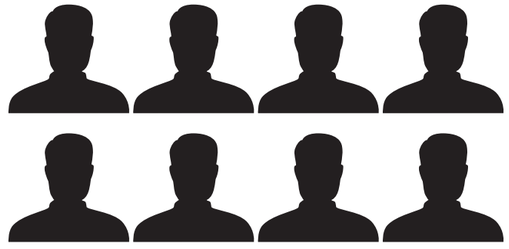
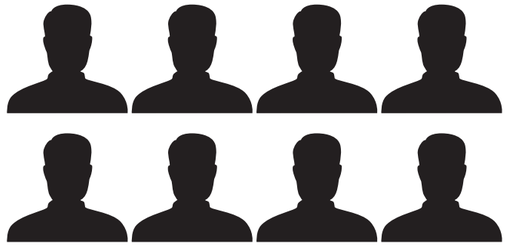
Teach you how smartphones can be data collection and transmission systems in a lot of different situations.

Concrete project goal

Plan, test, launch and retrieve a weather balloon that lifts a smartphone that collects, transmits, receives and stores data relevant to the mission and helps us retrieve it after it has landed.

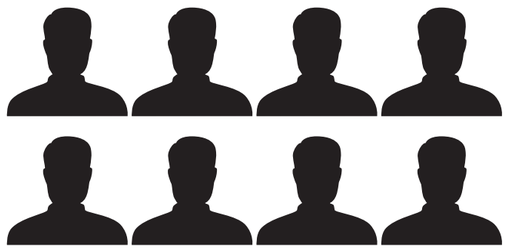
Use mobile systems during the organisation and work to do the work and communicate with the other members, and document what systems, services and apps you use.

Organisation

Organizing and PR	Launch vehicle	Payload
		

Organisation

Organizing and PR

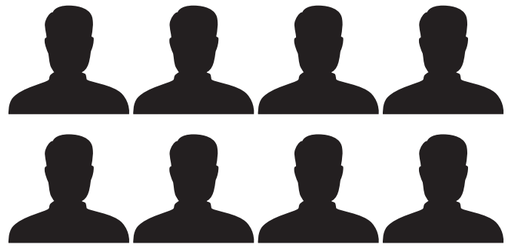


Tasks include:

- Weather and launch and landing predictions
- General Safety
- CAA Contact
- IMT3531 primary contact
- Armed forces contact
- PR contact (school, papers, broadcasting)

Organisation

Launch vehicle



Tasks for this group includes:

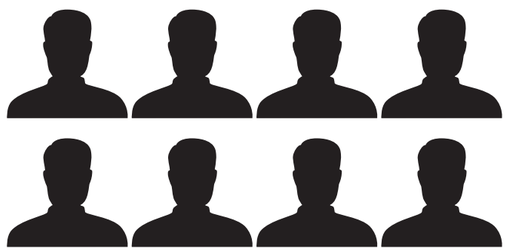
- Getting hold of gas and handling the filling of the balloon
- Getting hold of a weather balloon
- Create a lightweight cut-off mechanism that ensures that the payload does not fly into restricted airspace (could be done together with payload group)
- Test the balloon lift capacity
- Handle the practicalities of the launch, including safety
- Organise a launch-crew

Organisation

Tasks for this group includes:

- Find ways of logging relevant data
- Find ways of sending relevant data, especially related to recovery
- Ensure that the payload can receive relevant data
- Create a sufficient light, strong and waterproof encasing with a chute
- Ensure that the smartphone has power for the flight and the time it takes to recover it.
- Payload encasing markings showing the name and contact info for HiG
- Ideally, strobe lights and piezo-electric sound generators making recovery easier
- Take central part in the retrieval of the balloon payload

Payload



More information

https://docs.google.com/document/d/1-syHNEZTpStzZpsdUaTpznFPYn6c35SrtiuIiKm37XY/edit?hl=en#

Measuring learning outcome

All groups will need to document what they do on an open page (Google Docs).

That includes a log of what is done, and what decisions has been made. This is because we need to be able to go back and analyse a potential failure and discuss what went wrong.

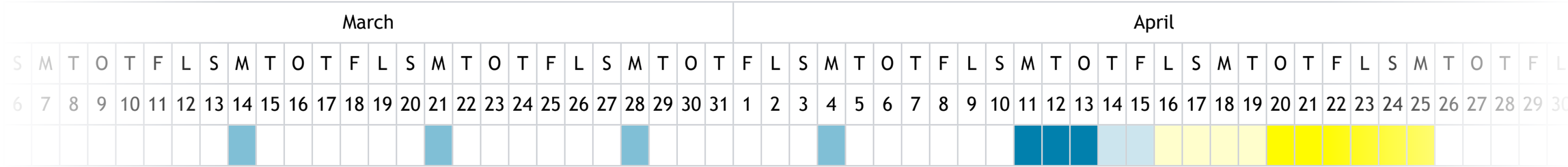
Afte the project, you will all write a new report that includes constructive comments about [1] how mobile systems aided your group during the project, and [2] how you think the other groups performed.

Failure?

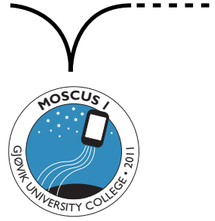
High probability of failure in this project as there are a lot of dependencies and unknown factors, but that could be a good learning experience anyway.

If the project fails, the report will still have to include reflection (and links to documentation) on what went wrong and why.

What comes now?



Today



Groups need now to:

- The primary google doc has got places for names under each group. Enlist where you want to work. Do it today.
- When groups are established, elect a group leader and a 2nd in command.
- Meet up as soon as possible this week and talk about the challenges ahead
- Establish a open document this week where you initially list the group members names/roles and as work progress - a log of everything that happens. Use Google Docs so that all your work is openly visible to all.
- Read through the material that is given you on the web page and contact me if anything is unclear
- Invite me to project meetings (minimum once a week until the launch

Media coverage

- This project could end up in the media. Use this as an opportunity to promote HiG, Gjøvik, this course and yourself.
- Also - second year bachelor students in medie production taking the course “digital media production systems” will cover your work and create podcasted programs in a studio created for this event. They will invite you to events were they would like to know what you are doing.

Contact information

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