

## **Homo Mobilis — Eksperter i Team**

# **Procrep**

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## **1 In the beginning**

More focus on: - How interaction worked. - Intra-group work presentations. (De er pådrag!)

## **2 Week one**

Subject dialogue - list important factors As instructed by the facilitators, we started mapping our areas of knowledge on large posters, in order to find our individual and collective strong and weak areas.

- Presenting the EMG idea During the session Mr. Arash made his initial presentation of an idea concerning diagnosis of patients using electromyography (EMG), which appeared to fit the group particularly well in addition to providing a new and challenging field for the participants.

While other project ideas were discussed, we all believed this EMG idea would be our actual subject. [[CHECK]]

Discussion on teamwork As a start on the creation of the team cooperation agreement we were instructed to consider and discuss what we wanted or wanted to avoid in the cooperation, in particular factors that helped create a good cooperation environment. - [[List of key items chosen (I think there is a large paper)]]

The team cooperation agreement is particularly useful when people of different backgrounds are to cooperate, as it can form a common base to build the rest of the cooperation on. It also enables us to have a common reference as baseline for expectations from each other.

[[Important concepts included, with theory.]] Of particular interest, the contents of the cooperation agreement describe our choice of goals, group leader style and responsibilities, method of

making decisions, work division and feedback to the rest of the group. In addition it designates a head communicator, Miss. Kristine, who will help with difficulties in communication.

According to [[Sz:2002]] the method of making decisions in a group is a trade-off between efficiency and internal acceptance of the decisions made. We came to the conclusion (by full consensus) that a simple, informed majority is sufficient for decisions within the group, while the other methods discussed included full consensus and external arbitration.

We decided to have a leader and rotate the position according to a static, repeating roster. This rotation enabled us to give the leader responsibility for the completion of weekly tasks like creation of group logs outside of the meetings proper.

It was decided to attempt to divide the work on the two reports in two focus teams, where each team has the responsibility for one report, while taking input from the other.

### 3 The second week

Rectification of C.ag'mnt. Importance of rectification?

Continuing the process of creating the team cooperation agreement, the draft agreement was reviewed. Imprecisions and contested sections were corrected to everyone's satisfaction and previously omitted paragraphs were added.

**The choice of subject** Before work could start, the group members had to agree on a project subject *citation needed*. A session was held where the members attempted to find a subject to fit as well as possible to the criteria spec'd by the EiT village.

One of the criteria for a subject is to include the professional field of every member and exploit the available diversity. The discussion would thus be greatly helped by every participant knowing the field of study for the others, according to [rule 1]. Thus, we all spoke a bit about what our topics of study were. This application of theory greatly helped the discussion, and opened our eyes to new angles to include all of our areas of expertise.

The discussion lead us to further support of the EMG diagnostisation project, as it was found to both exemplify the village theme and be simple to incorporate features exemplifying our various areas of expertise. In addition to the signal processing (Arash' specialty), it can include a distribution component to take advantage of Victor's network expertise. The acquisition of the EMG from a patient is within the field of both Erik and Kristine, and once acquired the EMG signal can also be used in useful cybernetic applications, Andreas' specialty.

The subject also exemplifies the village theme, *Homo Mobilis*, by being based on the processes in one of the building stones of human movement, the muscles.

[[check date, might be next week]] Before we left the village that day, we made a formal decision to have EMG as our project subject, in accordance with the procedure agreed upon in the cooperation agreement.

## 4 La troisième semaine

The day started with a Check-in activity, where we individually rated items after their utility for keeping the group alive after a plane crash in winter in northern Canada. Afterwards we had a discussion within the group and decided (in accordance with our coop.ag'mnt) on a group answer.

During this activity, we found that member participation varies between our group members, and (with the help of a *sociogram* made by Miss Marie) interaction is better between some group members than others and some apparent polarization where some members communicated better/more than others. This fact was decomposed into a number of causes:

- Good communication between participants with similar background, in particular Erik and Andreas.
- Different commitment to the task. In particular Arash considered the task to be off-topic, and thus didn't want to engage in a demanding debate over the choices.

This helped us identify a need to knit the group more tightly together. Andreas suggested we attempt to take control over the situation by collecting the group for the upcoming luncheon. This suggestion fell through, partly because the intention was not communicated with sufficient fidelity.

[Chinese new year] Due to the exact date of this village day, we were presented with a special consideration. The start of the Chinese New Year's celebrations caused Mr. Victor to wish to be excused from the group for the afternoon. It was unanimously decided that such cultural happenings should mandate absence from the group without penalty.

Andreas felt action was needed while reviewing the day, and posted the appended note to the group, according to [rule 4] regarding "open cards." [[I understand K. has detailed this]]

- Arranged to be taken to the EMG-lab next week. - Important to get better understanding of both the available equipment and expertise, and to get a fuller understanding of the subject that is EMG.

## 5 Closing words

## 6 Different cultural backgrounds

In a group with individuals from different countries it is important to take into consideration that there are many different cultural aspects and that it is important to learn a little bit about each other when working so close together. The main body of knowledge about the culture and persona of the team members has so far been learned during the check-in activities in the morning of Village days.

During the Village check-in activities of February 9, a large cultural difference between the group members was discovered. As we were discussing our favourite colours, Arash said his favourite colour was green while Victor later told us that green is associated with infidelity in his country. If a wife cheats on her husband, the husband is said to wear a green hat. Arash replied that they have the same expression in Iran only they use the colour red. The Norwegians in the group had no recollection of a similar expression used in Norway.

In accordance with [Schwartz] ground rule number 2 this is a very important part of the process, since not only the technological background is important when making decisions, but also the manner in which it is presented. Knowledge about other group members could lead to a quicker decision-making process since it might reduce the frequency of misunderstandings in communication. Later in the semester it was made clear to us that ...

## 7 The Situation

On the February 9 one of Schwartz ground rules for effective teamwork was broken by group members, resulting in an escalated Situation. Although the need arose, talking openly about potentially hard or uncomfortable issues, so called undiscussable issues, was not initiated. This happened during a discussion session about the specific goals in our project. Arash drew a schematic illustrating the project and focusing heavily on his favoured part in the project, the signal processing. A couple of days later there was posted a note on its learning from Andreas that he was sick of Arash not including his part in the project. Arash replied 22 hours later that he was surprised reading the note, and claimed never to have intentionally agitated the other members, and was open to the opinion of others as exemplified in this quote from his reply:

(...) I think every body can tell his or her opinion exactly when think it is wrong, (...)

The next meeting was as usual on Wednesday at 9 and we were not sure beforehand how the atmosphere in the group would be due to the posts. After the mandatory activities we decided to talk openly about the problems in the group, as the current environment was non-conducive to productivity. Both Andreas and Arash were called upon to explain their respective stories, which eventually solved the conflict as the group analysed the different views and converged on a project scope. Conflict in a group is not necessary a negative thing as long as we turn it into an experience we can learn something from and use it to improve the co-operation in the team.

## 8 Telephone list

When visiting the EMG lab the team got separated into two groups, due to there being many students present at the introduction. After the main introduction was completed, Andreas, Erik and Victor stayed to ask a few questions and obtain information from Professor Øyvind. Arash and Kristine did not notice this turn of events, as they were lost in the deluge of students

emerging from the laboratory to attend a different lecture in the basement. Kristine and Arash returned to the classroom in the basement and waited for the other three.

After a while they grew worried, and went looking for the rest but could not find them. Kristine eventually returned to the basement and found the rest of the group attending the lecture, but Arash didn't return until much later.

To avoid repeating this kind of mishap in the future, we decided to create a list over the group member's phone numbers, so it will be possible to reach the individual members if such should be necessary. This has saved time on later occasions, for example as Erik and Kristine met for the initial outline meeting for work on the process report without pre-emptively agreeing on a meeting location.

## **9 EMG equipment**

The team had a few difficulties with using the EMG equipment, and was not able to begin experiments including the signals until two weeks after the original plan. This was mostly due to faulty and/or missing equipment. The first time the power supply of the computer was broken, as it had been during the introduction to EMG. Thus, it had to be handed in for repair. The second time, the computer was back from repair but lacked the necessary software for signal acquisition. This led to some frustration in the group and we felt that the progress of the project was going to slow. The delay with the EMG signal resulted in a slight change in the project, proposed by Prof. Øyvind. We decided to avoid further EMG acquisition problems by basing the project on AMG and developing our own acquisition equipment. This was to prevent the group from lacking work and produced a task that was a bit different in the signal acquisition part but where the signal processing would be almost the same.

## **10 Introducing AMG**

We decided to try to complete the project with openings for both EMG and AMG, as most parts of the work will not be specific to one or the other. This gives the lucrative property that if one of the goals regarding the EMG or AMG fails, then the group can fall back on the other plan. The group also decided to continue with both projects in parallel to make sure that all group members have something to do at all times, as the EMG signals were already available while the AMG device had to be built.

## **11 Group form**

During the meeting on February 02, the group filled out forms concerning the dynamics of the group. It was clear that there were some disagreements, especially regarding the communication between the members and some members being of the opinion that the project goal was

unclear. After a quick discussion, the group stated that the reason the answers were different, at least regarding the goals for the project, was that the goals have changed a bit along the way. As such, the goals have changed, and different opinions about how the question wording should be interpreted resulted in different answers. An example of such a change is the change from just studying EMG to including AMG as well. This change made a big impact on the acquisition part of the project, since the signals (respectively; electric and acoustic) are acquired with vastly different equipment, resulting in two very different designs.

The other area of deviation in opinion was between Arash and the rest of the group. As he worded it in the group log of the week:

I thought the answers to them should be better!

A reason for this might be that he is one of the parts in most of the discussions where the communication fails. This was later brought up at the log feed-back meeting with the village student assistants (Miss Marie and Miss Marianne), and after some discussion the group decided to better explain our views, especially regarding the project direction and goals to alleviate further polarisation. It was also suggested that the language barrier might be a large part of this issue.

## 12 Project

When performing the signal acquisition, goal 1 of the EMG part, there were four of five members on the EMG lab. The initial plan of reusing parts of a previous project was thwarted by the non-existence of such. Erik, having prior experience with the acquisition software, was chosen to implement the signal acquisition to the direction of Arash's, who had knowledge about the EMG signal and the following processing. The others in the group watched the work for the most of the time and although this was not the most efficient work method, this is a central part of the project and it is therefore important to know most of the details regarding the different parts of the project.

### Might be worth to add at some point

- We decided against agendas.