

TFE4850 - EiT - Student satellite

Process report

Group 2

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Abstract

The process report abstract

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Chapter 1

Introduction

This chapter will contain a short introduction to our project. That means what we're doing and what people are working on the project. It will also be discussed some short background on why we're doing this project.

1.1 The Project group

The project group consisted of 6 people from 5 different studies, so we had a wide variety of competence to use in the project. The group members can be seen in. Since most of our group members came from technology studies, we agreed that we wanted to make something physical, and not just theorize.

1.1.1 Eirik

My name is Eirik Skjeggstad Dale. I study computer technology, with specialization in intelligent systems. This means I have a good sense of general programming, and know alot about solving difficult programming problems. This specialization is not the most relevant to this village, or any village, but if any programming bugs appear I can use it to try to solve them. What I can contribute to the group is general programming, and helping setting up the programs for the raspberry, and tuning it to the antenna system. I have also, through computer technology courses, worked on medium sized projects and hope my experience from these can help the group, specifically with writing our reports.

I chose the NUTS village because I've always been interested in space and everything that has to do with it. It's a real inspiration to know that I'm working on something that hopefully one day will be flying out in space and sending useful data back to us.

My expectations of EiT was that it seemed like formalizing things one already knew a lot, and that by extension it was quite boring and dull, with

a lot of dead time where the group did nothing. That being said, I felt that the village was interesting, and I was looking forward to the project, while I also hoped that this would give me a chance to work with people from different fields and while I thought it might feel a little forced and formalized, give me a chance to improve my teamworking abilities, and my conflict solving skills.

1.1.2 Hanne

My name is Hanne, I am studying Energy and Environmental engineering with specialization Energy and Heat Processes. This means that I have general knowledge about different renewable energy sources, thermodynamics, fluid mechanics, gas processing and energy processes. When I chose village for EiT I wanted to challenge myself by choosing something new and unfamiliar. The NUTS Student Satellite seemed incredibly exciting. But by challenging myself with a topic outside my study I became unsure how to apply my knowledge. I received mixed feedback about EiT from previous students. Many expressed that it was time consuming and that working in interdisciplinary groups were demanding. Taking this to consideration I expected that EiT would be challenging but with my choice of the village it would give me knowledge about something new. Regarding the interdisciplinary collaboration my expectations were both positive and negative. I looked forward to meeting new people with different backgrounds, but were unsure whether the group would manage to work together.

1.1.3 Marius Ekerholt

My name is Marius Ekerholt, in 2009 i started studying computer science at NTNU in Trondheim. I chose to specialize in artificial Intelligence. Since 2012 i have been working for a development company. I have alot of experience in developementing systems on web and mobile. I am good at finding solutions and i like working in groups. In this project i can see myself contributeing with technical insight and resolving different problems the group encounter. I chose this village because i have a generel interest in space and the technical aspect of it. I also looked forward to working with something outside my everyday activities. Besides the variation i also thought that the most important focus for EIT was to learn to work in groups with unfamiliar faces. I looked forward to meet new people with different background and work as a team despite our differences. I hope to gain new knowledge about different group processes and some knowlege about sattelites. I will do i best to make EIT an exciting project.

1.1.4 Børge

My name is Børge Irgens. I study theoretical physics at NTNU with primary focus on quantum entanglement. The reason I chose this EiT village is my interest in space physics and technology. My specialisation is not strictly relevant to the work I do in this course, but my skills in analysing physical systems (e.g. satellite orbits) and mathematics in general has been useful.

I've heard mixed reviews from other students about EiT, e.g. some people had problems with conflicts with other group members. This meant that I came into this project with kind of low expectations, but luckily it seems that everyone wants to do well on this course. Now I'm looking forward to hopefully learning a lot about both teamwork and satellites.

Chapter 2

The Project

This chapter contains what we did during the project in terms of the team process. We will discuss the different process elements used and how it affected the group, and helped us improve the teamwork within the team.

2.1 Teamwork agreement

The teamwork agreement is an agreement that goes outside the actual project description, and it is defined by the members of the group, based on what each group finds important. Early in the project we therefore wrote down a few key points that were important in terms of teamwork for the group members. The signed teamwork agreement can be seen in [Figure 2.1](#). We broke the agreement into three parts, delivery, wellbeing and learning. The delivery part contains all the points concerning the effort everyone is to put in, and what we're expecting in terms of quality and quantity of work. In the wellbeing section we wrote down what kind of atmosphere and leadership we wanted, as well as any social additions, like eating lunch together each wednesday. In the last section, learning, we wrote down how we wanted to deal with feedback and how to achieve good progress throughout the project, while keeping everyone up to speed.

2.2 Milestones

In order to keep the progress of the project steady, we decided we should define some milestones, to help give some perspective on how far we had gotten and how much remained to be done. This was also in the teamwork agreement, and it was one of the first things we did after we finished with the agreement.

The first milestone was to have our project definition ready to be handed in, and the components we would need to be ordered and on their way. This was scheduled for 13th of February.

Samarbeidsavtale for gruppe 2

30. januar 2013

v. 1.0

Leveranse

- Alle stiller til avtalt tidspunkt, dersom en ikke kan komme skal man gi beskjed til gruppen (SMS). Dersom samme person ofte kommer for sent skal det tas opp i drøftingsmøte.
- Alle skal delta likt på både prosjekt- og prosessrapporten, og har medansvar for at kvaliteten på arbeidet skal holde kravene til minimum B.
- Vi starter dagen med et daglig oppdateringsmøte og planlegging av dagen som kommer.

Trivsel

- Vi ønsker å ha det artig og trivelig. Vi har trivsel i fokus, fordi det er lettere å jobbe i et godt samarbeidsklima. For å bidra til dette vil vi lage teambuildingøvelser som for eksempel felles lunsj.
- Vi setter opp milepæler/delmål underveis for å unngå økt arbeidsmengde mot slutten av perioden.
- Vi vil ha flat ledelsesstruktur og rullere på rollene som ordstyrer og sekretær. Beslutninger skal tas demokratisk etter et møte hvor alle har kommet med sine synspunkter.
- Ved alvorlige avvik/brudd på samarbeidsavtalen skal det tas opp på et eget møte.

Læring

- Alle skal komme med konstruktive tilbakemeldinger, slik at vi kan forbedre arbeidet med prosjektet.
- Dokumenter som møtereferater o.l skal legges ut på itslearning og alle skal holde seg oppdatert på informasjonen som ligger der.
- For å få optimal framdrift er det viktig at alle gruppemedlemmer gir og søker hjelp av resten av gruppen.

Avtalen skal evalueres og evt. revideres om 5 uker

Underskrevet av:
30. januar 2013, Trondheim


Borge Irgens


Marius Ekerholt


Eirik Skjeggstad Dale


Hanne Thorshaug Andreassen


Leif-Einar Hustoft Pettersen


Hallstein Skjølsvik

Figure 2.1: The signed teamwork agreement

The next milestone was to connect the box to the ground station, so we could start the testing. Since the blue-box project later tanked we moved this milestone, to the 20th of Mars.

the last two milestones we set up for this project was to finish testing, and to finish the report, on the 17th and 24th of april, respectively.

2.3 SITRA-exercise

One of the first group exercises proposed by the facilitators was the SITRA-exercise. In this exercise we were handed a SITRA-sheet where different aspects where colour coded, and we were to evaluate the previous group reflection based on these colours. The colours helped evaluate the group reflections and give us an idea of where on the grading scale the reflections was, by giving different aspects, as shown in [Figure 2.2](#).

During this exercise the group discovered that we had written our first group reflection chiefly by explaining a situation followed by a reflection, both of them quite short and uninformative. This led to a larger focus on a deeper group reflection, with more theory and action considerations where that was applicable. The group felt that the exercise helped give a more objective view on how to write the group reflections, based on how they would be graded.

SITRA-øvelsen

Fargelagte vurderingskriterier

Karakter	Nødvendige forutsetninger		Gruppeprosessen	
	Situasjoner	Teori	Refleksjoner over situasjoner som gruppa har trukket fram	Aksjoner for å bedre samarbeidet om prosjektet
A Fremragende prestasjon som klart utmerker seg	Situasjons- fortellinger som synliggjør hvordan den enkeltes handlinger har innvirket på framgangen i prosjekt- arbeidet.	Anvender begrep og metoder på en særlig god måte.	Gruppa synliggjør meget godt sin utvikling i samarbeidet [gruppeprosessen] gjennom situasjonene som er trukket fram, og reflekterer meget godt over: • det enkelte gruppe-medlemmens opplevelse av egne og andres handlingsmønstre og væremåte i situasjonene • hensiktsmessigheten av de forskjellige handlingene • forbedringer i prosjektsamarbeidet	Gruppa gjør og evaluerer meget godt: • endret handlingsmønster for å forbedre en situasjon • videreføring og forsterking av et tiltak som fungerer
B Meget god prestasjon		Bruker noen relevante begrep.	Refleksjonene synliggjør meget godt: • hvordan gruppa kommuniserer og samarbeider • hvordan lojaliteten i gruppa påvirker kommunikasjonen	Gruppa gjør og bare delvis begrunner: • endring av handlingsmønstre for å forbedre en situasjon • videreføring og forsterking av et tiltak som fungerer
C Jevnt god prestasjon		Enkelte teoretiske aspekter flettet inn.	Gruppa reflekterer over den enkeltes handlingsmønstre og væremåte i situasjonen, hvordan de ga tilbakemeldinger til hverandre, og hvordan dette påvirket prosjektsamarbeidet.	Gruppa nevner enkelte ting de prøvde å få til for å bedre samarbeidet om prosjektet.
D En akseptabel prestasjon		Nevner teori uten å bruke den.	Refleksjonene synliggjør til en viss grad: • hvordan gruppa kommuniserer og samarbeider • hvordan lojaliteten i gruppa påvirker kommunikasjonen	
E Tilfredstillende minimalkravene	Situasjonene som nevnes er generelle. Enkeltpersoner lite synliggjort.		Studentene beskriver teamets arbeid og redegjør kronologisk for prosessen. Noen teknikker som har vært benyttet, og noe generell erfaring de har fått trekkes fram. Ingen refleksjon om hensiktsmessigheten ved egne handlinger.	
F Ikke bestått	Mangelfull oversikt over hendelsene i gruppa.	Mangelfull bruk av teori og begreper.	Besvarelsen er en ren kronologisk beskrivelse av møtene som ble holdt. Fravær av refleksjon og erkjennelse (begrunnes ofte med utsagn som: "Vi hadde ingen konflikter og derfor ingenting å skrive om ...")	Se for øvrig retningslinjer for prosessrapporten og "Veiledningen til studenter i EIT".

Figure 2.2: The SITRA-sheet given for the SITRA exercise

Bibliography

- [1] *Navn på item*. October 07 2012. Available at: <www.wikipedia.org>