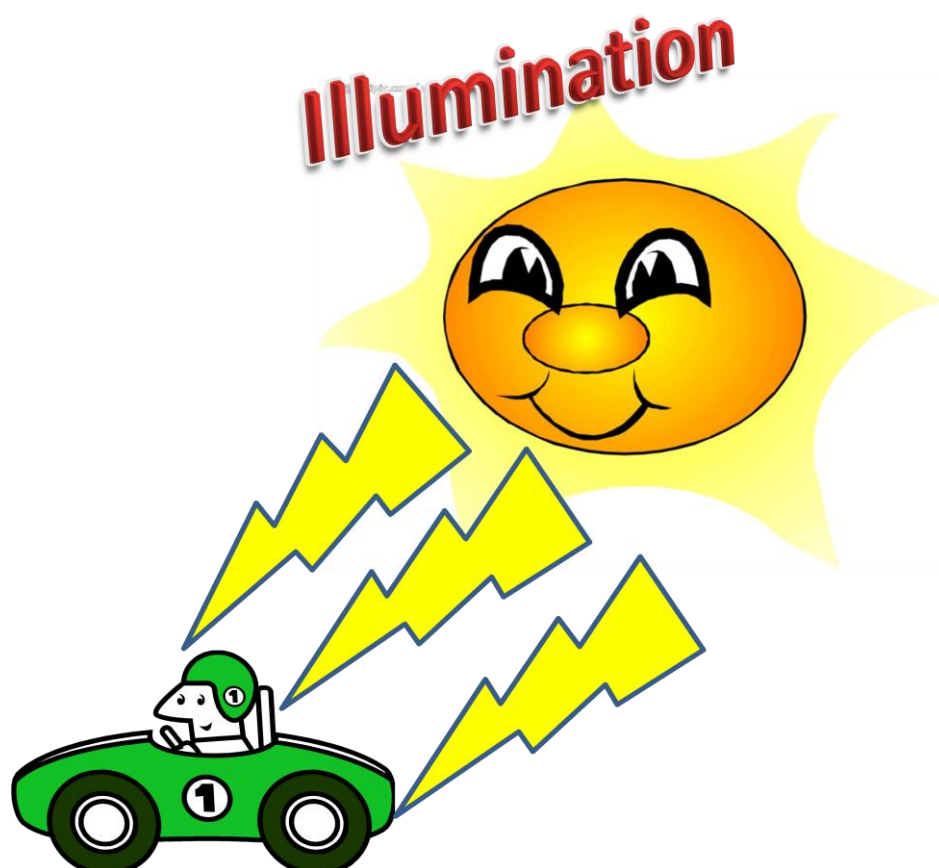

Team members:

Tang Yihan
Bleumers Jan
Huang Zhengyuan
Qian Hongzhu
Nogen Willem
Reda Yared
Sun Haowen

GROEP **T**

EE4 Project
Process Report



Introduction

The goal of this report is to analysis the team performance during the project, the evolution of the team members, the encountered problems and to discuss the changes in planning we made and why.

Planning

The original Gantt chart was followed with a few exceptions:

5.1 "Buy the materials": This was planned in weeks 4 and 5 but was not completed until week 8, due to difficulties in planning and designing the car which were mostly caused by the language difference and the different schedules of all the team members.

6. "do case SSV part 2": We fell behind our planning here as well, as the creating and assembly of the car took a lot longer than we thought.

Planning - organisational problems we experienced

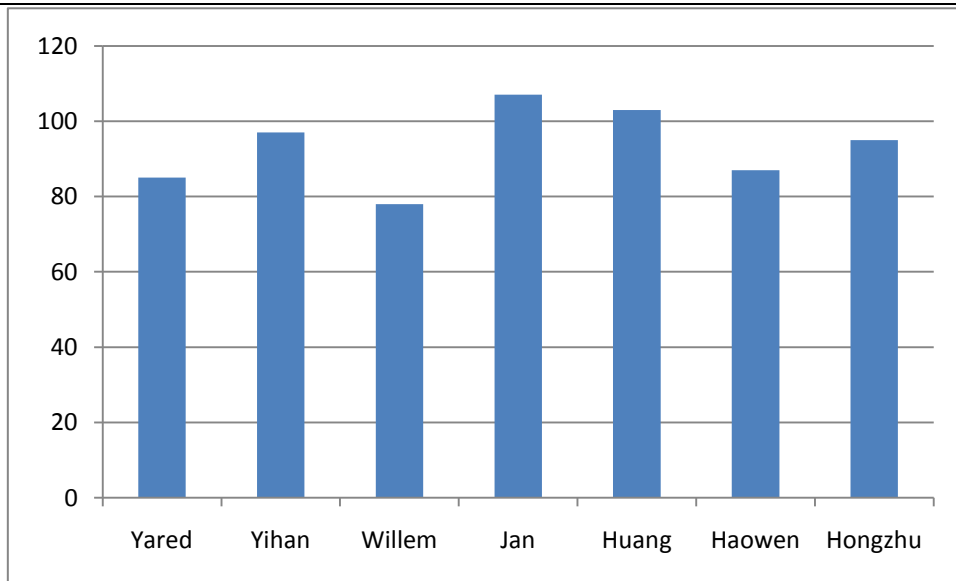
The first and biggest social problem was the language barrier. Communicating about meeting times and places was sometimes difficult. The hardest were the technical discussions. Due to limited English vocabulary of most of the team members, it was often difficult to explain an idea to the rest of the group, or to have a discussion about an idea with the group.

On top of that we have to work out our whole project in English, which is not the native language of any of the group members.

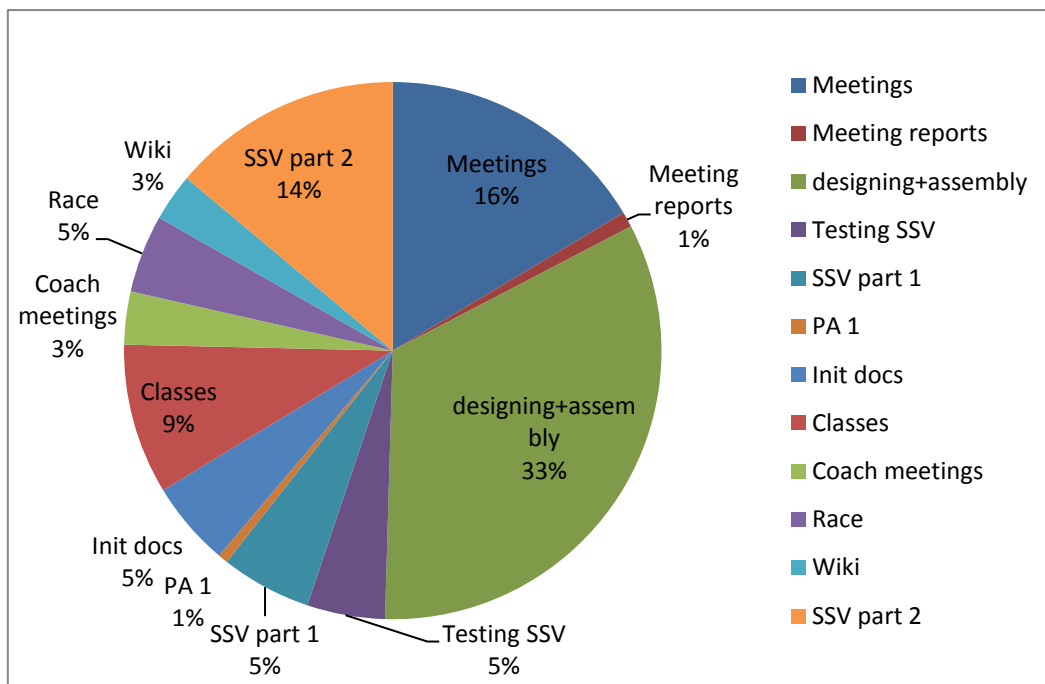
Another social problem is the fact that we all have different class schedules and that many of the exchange students were on different vacations during Easter holidays. Meeting was difficult and we quickly found ourselves falling behind on our schedule.

Cooperation

These graphs show the total hours per team member and the division of those hours between the different tasks.



Per hour



The hours of Yared and Willem are considerably lower than those of the other team members, this is in large part because they only joined the team a few weeks into the project, they missed the first seminars and meetings.

Most of our time was spent on designing, acquiring materials and building the car. We spent a lot of time in Fablab learning/using Inkscape and designing the required parts with it.

We feel that the hours we will have spent by the end of the project are not in balance with the weight of the course in the curriculum. We will have gone far above the projected number of working hours per person by week 14.

Skills

Due to our diverse team (3 nationalities), we had a good skillset to begin with, but these skills were not generally present, most skills were only possessed by 1 or 2 members, creating a large number of misunderstandings and subteams in solving the different tasks of the project. Only 1 or maybe 2 members had the required English skills to write a text document, only 2 members knew Simulink and only 1 had decent experience with Solid Edge. Structural insight was also limited, so we decided to limit the designing and building sessions to 2 or 3 people to increase speed.

The experience allowed us to train a set of different skills: All members increased their English skills as all the documents and meetings were handled in English. A few of us learned Inkscape and using a laser engraver/cutter from working at fablab. Other skills that were (further) developed are: planning, creative thinking, building websites, maintaining a Wiki page, ...

We also missed some skills, especially the skill to work with thin MDF wood. Our car had a technical defect in our 2nd race caused by a wooden support that was too weak. We overestimated the strength of the MDF and it cost us our race.

It would also have been nice if more members were fluent in English, that way the reviewing workload would have been spread out more among a number of different members.

The number one problem creating skill was the language: English. As not everyone mastered it, the load of writing/improving documents fell on very few members creating a lot of work. There was no easy solution for this, as English is not learned in a few months.

The number 2 problem skill was designing skill. We solved this by making the team that worked on the car smaller. This saved time and increased productivity.

Conclusion

The team is generally pleased with the process. Everyone had their own skill set and contributed where they could. Although it was often difficult to organize meeting or meet for building sessions, we always seemed to manage it. Our team also evolved from a group of random people to a group of friends, which as a bit surprising for some of us as we are literally coming from all ends of the world.

We are mostly pleased with the final product. Our car was fast, but only completed 1 race. This could be easily fixed by strengthening the failing support, but unfortunately there was no time for that. Apart from a small error in design, our car was exactly what we stated in our Plan of Approach.

Should we do a similar project again, we would start the designing phase sooner so we would have more time to test and redesign when needed. We would also have dedicated subteams from the start so the overlapping between members and tasks would be smaller, lessening the amount of time lost.

Working with an international team is more difficult, but also more rewarding. We

good a good look of each other's culture and we created a project in a language that is not native to any of the team members. We are all proud of that.

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