Portfolio Document

Thomas Schenk

# Persona

My name is Thomas Schenk and I am 22 years old. Originally, I am not from Brabant, but from Hilversum. Luckily, I moved a bit down to Utrecht; so the commute is (somewhat) doable!

Aside from my interest in Technology and software, often times I am found in the garage working on vintage motorcycles and cars. You could say that my life is split between a very high-tech field of work and a very low-tech field of work! This has given me the opportunity to think differently about high-tech problems, often with a very nice solution as an outcome.   
Besides that, I think old technology is just super cool!

When I’m not found working, I like to relax by playing some guitar or to research something affiliated with previously mentioned topics.

Personality Type:  
Diagram

Description automatically generated with medium confidence

# Context

For this semester, I would like to work on more electrical/mechanical aspects of the ICT world. I feel like software and technology are the most recognizable, the most pronounced when they have a mechanical function. Furthermore, the design and different principles which come into play when designing mechanical functionality opens up a whole range of new research and field of works; all which interest me.

# Project

## Assigned research project: Robot Platform Project

I have been assigned to the Robot Platform Project, this project aims to (re)create a soccer robot!

Soccer has been an ever-loved sport in the European world, with it now even spreading more vigorously to other continents. An increasingly popular method of jumping on the “soccer bandwagon”, is robots.

To eliminate the need for athletes, and to allow people who prefer tinkering instead of working out to enjoy soccer; robot soccer has been ‘invented’. These robot soccer matches are played all over the world and are experienced as equally as important as real-life soccer.

This project aims to recreate a soccer robot while using omni-wheel technology. These are specialized wheels which enable movement in a different way than conventional wheels. With this technology we aim to recreate a soccer robot with an aim to precise movement and localization.

## Personal project

We live in a world where cultural exploration and personal preference is easier than ever to explore, one of the leading industries in which this happens; is the music industry. Never have there been such a broad selection of music genres. Some are niche, some are mainstream. There is a genre for everyone.

Almost hand in hand with the revolutionary rise of the music industry, are the devices on which to listen to this music. Starting out with the big and bulky stereo receivers, all the way to the present day, where more artistic designs of speakers are becoming mainstream.

However, buried in all these new, artistic and creative music devices; another, far bigger, genre of audio devices is slowly rising. Retro stereo systems.

Audiophiles, name for audio-enthusiasts, have been hoarding old radios, stereos, record players, walkman’s and every other pre 1985 audio device known to man. Not only for their arguably pretty exteriors, but supposedly their guts are of sublime quality.

I had to see for myself, and I decided to give it a try; I dug up an old stereo receiver of my grandpa and have been listening to some music for the last month.

While the music is especially great and sounds very “full”. There usually is a plethora of knobs and buttons which can be used to further tune the output audio a bit.

Nothing really screams: “I am an old piece of hardware, and I am outdated”, except for getting an input signal.

To combat this, I will try to come up with a product which adds a wireless streaming functionality. This could then be implemented into these devices.

## Git repositories

To support the reader with quick access to my and my groups work, below are the links to the respective git repositories; which is the framework used to keep track of our progress.

Personal: <https://github.com/CursingThomas/Sem7>

Group: <https://projects.fhict.nl/minores/fall-23/robot-platform-2023-fall>

# Learning outcome table with proof

## Learning outcome table

|  |  |  |
| --- | --- | --- |
| **Learning outcome 1, covering analysis and advice:** You show insight into the behavior of different kinds of signals from the physical world, and you give recommendations how they can be used in an application. | Radio Controller  DSP workshops  Dynamic Load Controller | Current: B Self: P |
| **Learning outcome 2, covering design and realization:** Starting with a concrete application in mind, you provide a design for handling input signals and applying output signals, and you implement such a design in an actual proof-of-concept. | Motor Controller Radio Controller  Dynamic Load Controller | Current: B Self: P |
| **Learning outcome 3, covering manage and control:** You set up and make use of a well-managed development environment. You provide a thorough transfer of knowledge and work-products. | Usage of GIT  Frequent meetings | Current: B Self: P |
| **Learning outcome 4, covering future oriented organization:** You cooperate with stakeholders to reach an optimal fit for their needs. While cooperating, you recognize opportunities and risks and you actively take them into account. | Meetings with Edwin Making use of weekly update talks with group + Assisting documentation to underline agreements  Planning for project  Planning my work ahead of me. | Current: B Self: P |
| **Learning outcome 5, covering personal leadership and targeted interaction:** You work together in teams, and you motivate not only yourself but also your team. You reflect on and evaluate your own actions. | Self pro-active behaviour  Personal Development document (portfolio document) | Current: B Self: P |
| **Learning outcome 6, covering investigated problem solving:** You identify practical problems, and you resolve them in a structured manner. You transfer gathered knowledge in a clear and transparent way (Investigated Problem Solving). | Hardware Research  Network Parameter Research | Current: B Self: P |

# Timeslot retrospective and personal reflection

**Timeslot 1**

The first timeslot was very hard for me, I am demotivated a lot and I struggled a lot with getting things done. I think the teacher also saw this.   
  
For next time I try to phase things out a bit more; make them more tangible so I can pick them up more easily.

**Timeslot 2**

Still a very hard timeslot, I felt like I did not have enough time for everything. Nothing seemed to come to me as naturally as it normally does either, which complicated things immensely.   
  
Group wise, I couldn’t be at the campus for a lot of days. Personally, there was some stuff going on, but also transportation let me down for a solid week. Which was very demotivating too. The poor communication from the group made it so that I, at least that’s how I feel, got very little work done. And the work that I DID get done, was quickly redone by other group members, since they didn’t check the git.

Next timeslot I hope to be more present at the campus, and to get a more tangible assignment.

**Timeslot 3**

In timeslot 3 we decided that a new task in the group was more fitting, so I gradually started off working on this. I have only been able to put in a few days’ work; but I have something a little tangible already. It felt nice to work on something new for a change, which was something I might’ve needed.

I am happy to see that I have met my previous “Goal” which I have set in my timeslot #2 review.

**Timeslot 4**

I did a lot of work on the new assignment I got from Edwin, and I finished it too! I demoed it to him and he was very happy with my progress, which I really liked since I had put some hard work into it.  
  
I had to make a few changes to the format over the time I was busy with it, and he was proud that I didn’t get lost in making unworkable things work, and moved on. I hadnt thought about this the way he told it to me directly, but looking back that is exactly why I chose to move on. It was funny that he made me realize that.

**Timeslot 5**

I did a lot of work previous timeslot, though it was found that it wasn’t enough. Therefore I spent this timeslot to do a lot of repairing work and make a new research about control loops. This was quite fun.

**Timeslot 6**

This was the final timeslot I had made for repairing and fixing various things that were still missing. I did a ton of work, with a positive outcome. My work was deemed good and qualitative of the bar set for this semester.

Sadly work alone is not enough to prove capability, and some professional skills were lacking this semester. I tried addressing those when it became apparent that I should, but I can only do so much in the short amount of time that was still left. Brice and I talked about this and made sure that everything was clear.

# Evaluation and reflection on the whole semester

For me this semester was very different from others, I felt like it was structured differently which somehow made it feel less logical.

The grading system was a bit weird to me, relying on progress instead of actual skill/delivery. Which at the end seemed to flip its meaning around. For the next time I will make sure I understand this better, since I think it has caused me some problems.

Furthermore I experienced problems with communication. Previous semester I was very involved with my group, maybe too involved even. Controlling much of what happened and sometimes even taking work away from others. I aimed to not do that this semester, but it turns out that I picked the other extreme on the spectrum. My communication and involvement about choices was too little this time. For the next semester, I should find a sweet spot which lies in between. This requires me to progress and learn more about planning, communication and how to divert tasks properly. But I should also learn to trust that others do their tasks and take their responsibilities, something I struggle to do.

Concluding, I think this is a semester where I learned more about myself than about the skills and technical problems. Naturally, I had a lot of fun tackling those technical problems. But learning more about myself rather than the matter might not necessarily be a bad thing. I think this experience might set me up better going forward and into the internship.

# Feedpulse

Timeslot Feedpulse:  
A screenshot of a computer

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Timeslot 2 Feedpulse:

A screenshot of a chat

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Timeslot 3 Feedpulse:

A screenshot of a computer screen

Description automatically generated

Timeslot 4 Feedpulse:

A screenshot of a computer

Description automatically generated

I always enter these timeslot feedpulses the day I am uploading my portfolio, since I have the notes written out from every meeting. However Bryce noticed I hadn’t filled it in, and filled it in himself! His remarks align with mine.

Timeslot 5 Feedpulse:

A screenshot of a computer

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Timeslot 6 Feedpulse:  
A screenshot of a chat

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