DDBC2 — Design Project 3

‘DynaDash’ Reflection

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04.01.2016

Even though this project was not my first choice, it still caught my eye as I saw some learning opportunities, specific to this project. The Autonomous Vehicles project provided a lot of freedom in the design brief, the final design could be anything, as long as it improved the either the experience, the physical comfort, or the communication to the outside world in the context of autonomous vehicles.

My main driving force in this project was my ambition to explore and implement intricate mechanics in a product in order to create an interesting, interactive prototype. Of course, this took a lot of careful planning, we had to ensure that we were actually able to materialize the concept we had in mind. Therefore, the first few phase of the project was mainly spent generating ideas and doing research on physical quantities.

To start off, the framework we needed to design did not only have to be both functionally and aesthetically sound, it also had to be good from a structural standpoint. In order to be able to calculate the properties of the framework we decided on using a laser cutter to shape the individual parts. In my opinion, my biggest achievement during this project was the way we structured things.

Every part of our design was conscientiously calculated through literature research and input from experts. Still, our approach proved to be somewhat flawed. We overlooked some crucial parts in the process, which had the consequence that certain calculations were slightly different than the reality. A big learning point for me to double check every step, since it can save a lot of time and effort later on when you have to correct your mistakes.

Prior to this project I had some brief experiences with laser cutting in a previous project, I have never used laser cut parts as a foundation quite like we did in this project. The intricate details required us to use 3D models of our concept, made in CAD software. Based on these drawings we made laser cutter suitable documents using Adobe Illustrator. Using the dimensions and the properties of the structure we were able to assess and calculate what kind of motors we needed to use. Because of the aforementioned errors in the process, we ended up having to adjust the mechanics behind our design slightly.

The entire process of designing a sturdy frame from scratch has allowed me to grow substantially in my competency in using CAD software, vector drawing software and the overall use of laser cut technology. During the project I took the lead when it came to digital work, e.g. communicating our ideas with posters, small animations and the layout of the report. During this project I have realised that digital design is one of the most appealing fields in design for me.

In the second quartile of this semester I took part in an elective on business. Before I started this semester I was not really aware of the role of business in design, but as the elective advanced it became more clear to me. I introduced a technique I picked up in the elective, called Customer Empathy Mapping to the brainstorming sessions. With this, we put ourselves in the perspective of the potential user base, and imagined the pains and gains they experienced. This proved to be a resourceful tool that I will definitely try to implement in future design processes.

In conclusion, this project allowed me to apply both skills I have gained during past semesters, as well as newly gained skills. In my B2.1 Personal Development Plan I stated that I mainly wanted to improve my competence in the Technology and Realization competency, and I feel like I succeeded by designing and realizing a fully functional future dashboard simulation concept, and I am very content with the outcome.