



POSITION DETERMINATION FOR COOPERATIVE SWARMBOTS

Assignment

Designing a new platform for the SwarmBots to allow future additions and improvements. This includes redesigning the main electronics board which contains the microcontroller and replacing the current position determination method with a new one that is easier to use and integrated into the SwarmBot and field edge markers themselves. Also, new motor driver implementations for new motor types (Brushed DC, BLDC, ...) are needed. The sub-circuits that are designed for this project are added to our library of snippets so they can be reused for future designs.

Context.

A SwarmBot is a small robot vehicle which is part of a group of SwarmBots. These SwarmBots are individual driving robots that interactively collaborate to complete a variety of task ranging from for example forming polygon formations, avoiding obstacles, push objects and being able to play the retro game "Snake".

Internship overview

- Bachelor Student
- Internship / Graduation
- Electronics
- Location: Eindhoven

Technologies

- Position determination
- Microcontroller
- Schematics
- Layout
- BLDC Motor drivers



Activities

- Make requirements;
- Researching components;
- Detailed design description;
- Schematics;
- Layout;
- Create a design test plan;
- Design testing;
- Interboard interference;
- Debugging



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Would you like to know more about this student assignment?

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