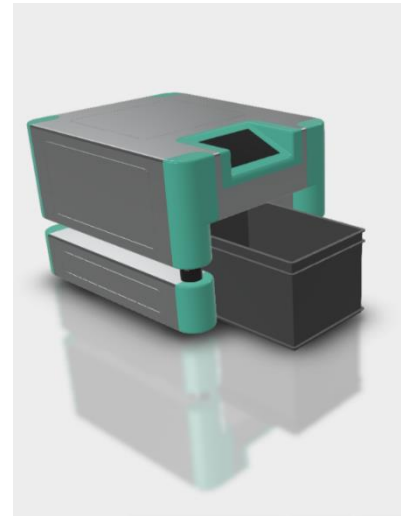


PLC for Industrial Mobile Robot

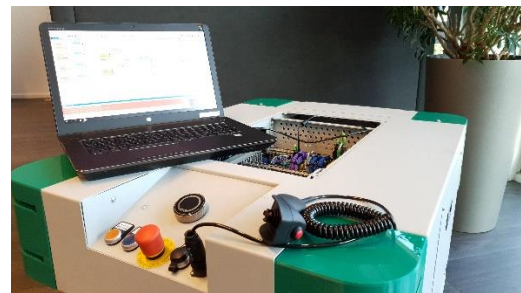
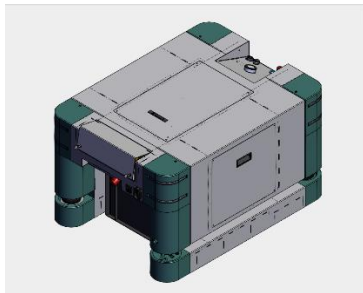
In the Next Generation Navigation (NeNa) project, Saxion is developing a mobile robot based on open source software. The hardware of the robot is already designed and developed and the high level software is under development.

This assignment focuses on the software layer between the hardware and the high level software. Some functions of the layer are completed. The goal of the assignment is to further develop this layer and implement a software infrastructure that will be deployed on the mobile robot. The software will be developed for an industrial PLC (Sigmatek). One important aspect of the PLC will be the safety functions of the robot.



Task description

Further develop the modular design for the software based on the subcomponents of the mobile robot. Develop and test the software for the individual sensors and actuators on the robot. Design and implement safety functions. Implement and test the data communication between the hardware and the high level software using OPC-UA.



Practical Information

Student Profile: Applied Computer Science, Computer Science (HBO-ICT), Electronics, Mechatronics (with interest in PLC software aspects of robotics)

Duration: February 2021 – July 2020

Compensation: 230 euro per month, before taxes

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