Software Security of AGV Solution (Eindhoven)

Category: Internship
Education level: MSc Computer Science / BSc Computer Science

Context

Prodrive technologies is a developer and manufacturer of world-class electronics. It comprises over 900 employees and is one of the fastest growing companies in Europe. Our organization is based on two groups: Development and Operations. The Development department is oriented at developing first-rate electronic, mechanic and software solutions. The operations department is responsible for production, assembly, testing and life-cycle-management of electronic products and systems in the range of 1 to more than a million pieces per year.

Recently, Prodrive has developed AGVs to support factory logistic automation. AGVs are vehicles which autonomously transport goods (e.g. boxes with materials). AGVs are used within a production and warehouse environment for logistic purposes (i.e. goods flow). Our first prototypes are already operating in our production facilities. Currently we are improving these prototypes to market-ready products.

Since multiple AGVs should be working together, Prodrive developed a Fleet Management System (FMS). The FMS is responsible for distributing the jobs over the available AGVs, showing the customers what the AGVs are doing and managing properties of the environment and AGVs.

Assignment

The AGV solution has certain requirements for its security, e.g. it should not be possible to eavesdrop the communication between the AGVs and the FMS. You, as a student will be responsible for the software security of the AGV solution. This includes all the communication between AGVs and FMS as well as the AGV and FMS filesystems.

Deliverables

- Pre-study document (literature study) of possible security issues and solutions.
- Implementation of chosen solutions.
- Tests to verify the implementation.

Important note: all our graduation assignments are dependent on time. Please see them as an example of the many great things you can do at Prodrive Technologies. If you have the same passion for technology as we do, we always have an assignment for you!

Benefits as a student

Next to the benefits which are true for every Prodriver that are listed below, some special benefits must be highlighted for students. First of all you will be treated as a real Prodriver. Your opinion and ideas will be heard and treated as full. Next to this you will get the chance to work with colleagues with a very high level of knowledge in their field and get the chance to use our world class lab and production facilities for your graduation assignment.

Your benefits

When you are able to prove that you are the perfect fit for our job, you will be rewarded in many ways: you will get the chance to develop yourself as a person, gain extensive knowledge and develop your career in multiple directions. Besides that, you will – naturally – be offered a market competitive salary and outstanding secondary conditions. Your salary growth is in line with your own professional development so it can grow fast and you will even get the opportunity to become a shareholder. All this at an employer that has achieved an average annual growth of 25% over the last 20 years!

Organization

There are only few companies in the world of technology which stand out. According to our customers Prodrive Technologies is one of them. Our company was founded in 1993 by technical professionals from the Eindhoven University of Technology. Since then every year Prodrive Technologies has shown a steep growth rate due to a very successful business concept in a young and dynamic organization (average age 28 years). Currently the total Prodrive Technologies organization consists of over 1.100 (900 FTE) employees which are highly skilled, highly motivated and focused on results.