BACHELOR THESIS

ESI-File Generator

Are you looking for an opportunity to write your thesis in an industrial environment or obtain valuable industry experience, during or after your technical education? Here is one of many interesting topics we have on offer. We are also very open to your own ideas in order to create a matching opportunity for you at VAT.

Innovation has always been the driving force at VAT since the company was founded over 50 years ago. This has made us the world leader in vacuum valves and vacuum sealing technology. This pioneering spirit motivates us daily to meet our customers' requirements with enthusiasm. Together with our employees we stand for passion, innovation and quality. VAT is headquartered in Haag (Switzerland) and employs approximately 2 000 people worldwide. It has production centers in Haag (Switzerland), Penang (Malaysia) and Arad (Romania) as well as a production facility in Xinwu (Taiwan). With our customers mainly being situated in the United States and Asia, this provides a great opportunity to start an international career.

What you will explore:

An ESI-file (EtherCAT Slave Information) is a XML-based device description that contains all specific protocol objects of a slave-device. Customers are using this file to identify the device within the EtherCAT network. Furthermore, with an ESI-file the customer is able to prepare and program the device before a real hardware (e.g. valve) is available. More and more of our VAT valves are equipped with EtherCAT interfaces as this is the enforced standard communication fieldbus in the semiconductor industry.

To cover all object-directory data of the valve-controller firmware we need an ESI-file generator that automatically creates such a file in a time-optimized manner. Nowadays this task is a time-consuming operation step that needs to be done manually with a high risk of generating failures. This needs to be realized by a specific EtherCAT-master software-tool, which reads all the data online via EtherCAT and finally generates the desired XML-file.

What you will need:
- Programming skills (C, embedded C, XML, GUI)
- Experience in creating an executable tool - preferred based on a GUI
- Basic Fieldbus knowledge (EtherCAT recommended)
- Teamwork and self-contained working methods

What we will offer:
- Practical experience in the semiconductor industry
- Supervision and support by experts in the related topics
- Exploration of prospective employer to start the working career after your study
- Content & scope of this thesis may be discussed and defined in further detail

Are You Ready for the Challenge?

Then we look forward to receiving your **electronic application sent to Harald Sonderegger.**
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