

Thesis Proposal

Software Documentation of Legacy Code

Description

ADB Safegate develop solutions improving the safety, throughput and efficiency at airports. We have many world-leading products in our portfolio, and many of them rely on software to achieve their high level of performance. Since some of the products have a life-time of up to 20 years our codebase consists of both new development and maintenance of legacy code. It is a well-known fact that code evolves and after a few years it is uncertain what correlation there is between code and design documentation unless methods and tools address this. It might also be that aspects concerning the system have emerged over the years that were not considered when the original documentation was written, making it necessary to supplement existing documentation with new information.

The thesis project will require getting familiar with reviewing and running an existing software system at ADB Safegate, as well as understanding the needs of the organisation and business domain when it comes to software documentation. The first part of the project will be to identify relevant goals of software documentation and means to achieve these. The second part will investigate tools and methods supporting documentation and apply these to an existing software project. ADB Safegate welcomes any suggestions for refactoring based on the result of the reconstructed documentation. The thesis project is most suitable for two students working together. It will be based in Malmö and may also include visits to other offices within ADB Safegate.

Tasks within the project:

- ▶ Identify the goal(s) of design documentation
- ▶ Investigate possible methods and tools for documentation and reconstruction
- ▶ Perform the reconstruction of the chosen system
- ▶ Evaluate the results versus the goals

Suitable skills and interests:

- ▶ Software in embedded systems, especially C++ and/or C#
- ▶ Software architecture and documentation
- ▶ Software engineering processes and standards
- ▶ Code reviews

Application

Please send your application by December 1st 2017 to thesis@adbsafegate.com.

Title your email "**Master Thesis - Software Documentation of Legacy Code**"

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