

Handläggare
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A telematics computer system built from components

Host Mobility AB develops and delivers computer platforms for general telematics applications. Software in the latter systems is used in thousands of installations and has through the years grown in an organic way. Now it is time for reorganising and restructuring this software for future platforms.

The system needs:

- A homogenous and congruent API.
- Version control on all levels.
- Configuration control on all levels.
- A common IDE for all software work.

There are three fundamental technologies and methodologies for analysis, design and implementation of modern software systems to make them easy to develop, verify and implement:

- Object oriented methodology.
- Component based implementation.
- Automated testing.

We suggest a master thesis work for two Chalmers students for the revision of the software system with the aid of these technologies and methodologies. This will make the system well fit for wide range of future applications with distributed measurement, surveillance and control in industrial automation. It will also make possible the development of a compiler for a programming language suitable for end users.

The master thesis work will consist of the following work packages:

- Analysis of user needs and requirements.
- Analysis of signal types in industrial systems for measuring, surveillance and control.
- Analysis of data types in typical telematics applications.
- Analysis and modelling of software objects.
- Design of programs for the conversion of the value of one type of physical entity to the corresponding data value in an application program and vice versa.
- Design and implementation of a program for automatic testing of at least one of the software objects.
- Implementation of components in a pilot system.

The work will be done at Host Mobility in close cooperation with the development team and the supervisor. Host Mobility is a subsidiary of SETEK Group AB and co-located with SETEK Systems AB in Mölndal.

SETEK Systems AB is a company with an extensive experience of developing and delivering dependable systems in hardware and software. Main deliveries are rugged computers and communication equipment for diagnosis and testing in workshops for the automotive industry.

For further information and application, please contact

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