

CONSULTANT PROFILE

#247

Software developer. Year of birth 1975
Speciality: Embedded software

Work experience

1999 – 2014 MARIMATECH
Software developer and designer

1997 – 1999 Tekfa
Electronic Engineer

1994 – 1994 Jydsk Telefon (Today TDC)
Electronic Trainee

Competences

Tools

- Eclipse
- JTAG
- AVR Studio
- JProfiler

Programming languages

- C
- C++
- JAVA

Technologies

- RS-485
- RS-232
- GPS Receivers
- UHF radio
- Laser distance measurement devices

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Education

2009 – 2011 Business Academy Aarhus
Academy Profession, IT

1991 – 1996 Aarhus technical school
Electronic technician

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Project references

MARIMATECH

January 2014 – April 2014

E-SEA FIX CAT ROT / CAT 1

Sole software developer on the new duo of portable piloting units, the CAT ROT v2 and CAT 1. They are used by pilots (for ships, not planes) to have safe and reliable navigation equipment everywhere they go. The units obtain their current position, speed and course from a built in GPS device. In the case of the CAT ROT, extra information such as heading and other targets is obtained from the vessel's Pilot plug (also referred to as AIS connection). Rate of turn information is generated thanks to a built in rate sensor coupled with a kalman filter. The software platform is an Cortex m3 based CPU from NXP.

- Start up of custom hardware platform, based on the NXP CPU.
- Sole software designer / developer on all the embedded code.
- Hardware sparring partner, including choosing components.
- Main tester of all parts, both software and hardware.

October 2011 – January 2012 LMS4-T

The LMS4-T is an IO board containing a number of digital inputs, digital outputs and analogue inputs available over an Modbus RTU RS-485 communication bus. It is used to take connect to many different sensors in the field. The primary use is for use in a Quick Release Hook unit. These are the 2-4 Tons heavy hooks on which the mooring ropes are attached to when a large ship is berthed. Its hardware is based upon a small Atmel microprocessor. The unit had been developed externally earlier, but its embedded software was very badly bug ridden. The decision was made to scrap the software and start over, and the task was passed on to me. It ended up with a C based solution developed using the Atmel AVR studio IDE.

- Sole software designer / developer on the new embedded software.
- Reverse engineering the existing solution
- Setting up development environment.
- Part of the Testing team

January 2001– June 2014

MARIMATECH LMS Concept

Founding member of the team behind the LMS concept developed by MARIMATECH. LMS stands for Lan Micro Server, and the concept is a highly flexible distributed network. The main idea is the ability to have small processing devices in the field, close to the sensors, doing the data collecting and processing, then making the final result available to any device on the network. Further more, the functions of a given device is not fixed from the start. It can be configured to take on new responsibilities on the fly, simply by configuring over the network. This can be done on the fly, even without interrupting the current tasks. During the time a number of platforms have been used, in the end settling on Linux based computers. Programming wise has been a combination of C++ and JAVA. C++ was used for the data collection and calculations, and JAVA was used for visualisation and SQL database storage. The system has been used to develop the MARIMATECH Docking systems since it was introduced on the market.

- Founding member of the concept
- Main developer of all software, both JAVA and C++ code.
- Primary support person to system integrators.

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June 2011 – December 2013 Customized Linux distributions

A customized Linux distribution was developed which made it easy for people with no knowledge of Linux to install and configure Linux computers. A few different versions were made during the time period, mainly because hardware changed over time. As part of the distribution an installer was also created, which allowed for a very quick and efficient install. It also contained a backup and restore functionality. The entire installer including backup data was working from a 4GB USB memory stick. In the end, the users actually ended up preferring Linux over Windows for the server computers. It was easier and faster to work with.

- Core developer of the Linux installer stick
- Core developer (ending up being solo member) of Linux distribution.

TEKFA

October 1997 – September 1999 TEKFA

Repairing and producing weighing transmitters and weighing computers.

- Producing weighing transmitters and weighing computers.
- Repairing weighing transmitters and weighing computers.

Jydsk telefon (Today TDC)

January 1994 – December 1994 Repairing cordless phones

Part of the department which was repairing cordless telephones, primarily of the brand Dancall.

- Trainee in electronic technician work
- Member of the repair team.

Competences (continued)

Environments

- Eclipse
- Windows
- Linux

Processors

- Atmel ATmega series
- NXP Cortex m3 based

Languages

- Danish
- English