

Volker Floeder

Senior Software Consultant

Project Manager + Team Lead + Architect
Developer + Analyst

Specializing in Cross-Platform & -Architecture, high performance, high availability secure and reliable systems.

Broad experience in commercial software architecture and development; experienced in all stages of the software development lifecycle.

Experienced team and project lead, excellent working with customers; agile and eXtreme Programming practitioner and mentor.

Quality advocate, self-motivated, excellent verbal and written communication skills.

Mainly working on system improvement and optimization regarding embedded systems, especially concerning stability, performance and maintainability.

Personal Details

Name Volker Floeder

Address Haydnstraße 22
D-27570 Bremerhaven, Germany

Education Details 1980 – 1986 University of Hamburg, Germany

Mathematics: Combinatorics, Design Theory, Graph Theory, Numerical Methods

Computer Science: Software Design, Operating System Design, Programming Languages, Compiler Design, Optimal Algorithms

Areas of Specialization Software Design especially Cross-Platform & -Architecture including Validation & Verification, Object Oriented Design, Multi-Threading, Compiler Construction, System Programming, Digital Maps / Navigation, Transport Protocols

Selected Skills

- Project Management** Team Building & Mentoring, Project Scheduling, Client Relations & Presentations, Risk-Management, Assessments, Greenfield Projects
- Coaching** Introduction of Cross-Plattform Tools (CMake, GNU, LLVM), Libraries (wxWidgets, GigaBASE) and Methodologies for Binary and Sourcecode compatibility (Dynamically Loadable Modules with Standardized Interfaces vs. Conditional Compilation and Generic Programming)
- Software Architecture regarding Cross-Platform Development, i.e. Layered Design, Functional Programming, Message-based Communication, Client-Server Architecture for Distributed Systems.
- Hardware in the Loop / Software-Simulation to test and analyze early.
- Software-Metrics, Code-Reviews. Audits and Assessments.
- Architecting** **Requirements Analysis:** Rapid elicitation of System Requirements through Use-Case Analysis and Non-Functional Prototypes; creation of Software Requirement Specifications; Story-Cards; Refactoring
- System Design:** Data Modelling, System Design Specification, Interface Control Specification, Performance Analysis, Algorithm-Complexity, Pattern-Driven Design, Domain-Driven Design, Intention-Revealing Interfaces
- Software Engineering** **Languages:** C++ (with MISRA C++), C, Assembly Languages, Python, Shell-Script, UML, XML
- Systems:** Linux, Windows, QNX, VxWorks, RTOS-Kernel
- Libraries:** C++ Standard Lib (STL), Boost 1.6x (asio), wxWidgets 3.x, TinyXml 2.x, GigaBASE 3.9, MySQL 5.x, QT 4.x, wpa_supplicant 2.x, Procol Buffers 2.x, nanomsg
- Tools:** Visual Studio, gcc, clang, MinGW, VTune, Parallel Studio, Purify / Quantify / Coverage, Insure++, Valgrind, Dr. Memory, Clang-Sanitizer, Subversion, Git, CMake, Hudson/Jenkins, BugZilla, Trac, TestRail, Polarion, Enterprise Architect, CLion, Coati, Wireshark, Understand 3.x, Typora
- Protocols** TCP/IP, UDP, HDLC, RLP, CAN, ADASIS, NMEA 0183
- Methods** Agile Software Development, Scrum, Extreme Programming / Pair Programming, Test Driven Development, V-Model, Generic Programming
- Languages** German: Native
English: Full professional proficiency
- Hobbies and Interests** I am a Hovercraft enthusiast and licensed pilot for a **Small Sized Commercial Hovercraft** carrying up to 12 people in near-shore coastal waters.

Professional Experience

- Since 1999** **Floeder IS GmbH**
Founder and CEO
- Field** Mobile Communication, Advanced Driver Assistance Systems, Digital Maps, Car Navigation, Embedded Linux, Windows Tools, Software Reviews
- Customers** Audi, Blaupunkt, BMW, DKS-Köln, Daimler, Ford, HarmanBecker, Höft&Wessel AG, Ibeo AS, Intermap, MAN, Nokia(Navteq), Opel, Porsche, TomTom(Tele Atlas), Vorwerk, ZF
- Projects**
- Since 2015 Kitchen Appliance
 Twelve Functions Kitchen Appliance that can mix and cook all at the same time, featuring recipe chips, touchscreen, Wifi connectivity with a unique Guided Cooking function.
 Role: Senior Consultant - Embedded Linux Developer and Architect: System improvement especially regarding Wifi-Connectivity and other Low-Level functionality.
- 2014 - 2015 Video Monitoring for Public Transportation Systems
 Video streaming and recording system for train systems, featuring in- and outside camera systems, alarming and more, letting the driver oversee what is going on.
 Role: Senior Consultant - Embedded Linux Developer and Architect: System improvement regarding stability of the various communication channels between the different components of the distributed system.
- 2013 - 2014 Mobile Communication Device
 Mobile communication device for shunting to replace analog radio by GSM-R. The implementation was already 24 months behind schedule in spring 2013.
 Role: Senior Consultant – Principal Software Architect
- 2006 - 2012 RAPS, ADAS, digital maps
 Electronic-Horizon provider to be used in map-based driver assistance systems. Runs on several operating systems and implements unique features like **Context-Based Road-Matching, Turn-Prediction** and dynamic length of the predicted path. Used by Daimler, Ford, MAN and ZF.
 RAPS obtained a funding of € 700,000 in 2009 by Innovationsstiftung Hamburg.
 Role: Principal Software Architect – Project-Manager
- GDF-Import
 The **fastest available map compiler**. Two hour compilation time on a single workstation, where others need two weeks on a server farm.
 Role: Principal Software Architect and Developer – Project-Manager