

Resume

Igor Zlatković



Birth: 13. March 1974 in Sarajevo, BIH

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Nationality: German

I am experienced in the field of software engineering in many industrial areas, ranging from device drivers to web-applications. I lay particular interest in the application of software in scientific and technical field.

Brief History

I was born on 13. March 1974 in Sarajevo, the capitol of today's Bosnia. Living in a city surrounded by high mountains, I found love for snow sports in early childhood. There I attended the secondary school for electrotechnics and electronics.

In 1992 I moved to Frakfurt am Main, Germany's most prominent financial centre. I studied at the Frankfurt's University of Applied Sciences and collected working experience in the software industry.

Over the years I gathered experience in a wide range of applications for software including research, financial, business and embedded ones.

Today I live in Munich, Germany, engaged in the embedded software development in the automotive industry.

Skill Overview

My mother tongue in programming was C, followed closely by C++, peppered with the assembly language of the underlying hardware. These being my first languages, I have from the beginning developed a sense for how register-based machines operate, about addressing modes and binary arithmetic. From the beginning I became knowledgeable about information theory, common data types, algorithms and design patterns.

Later on, I was involved in programming on top of the stack-based virtual machines such as Java and CLR. Along with it came the structured document processing, in particular complex XSLT transformations of XML and DOM manipulation of SVG with JavaScript. I have had involvement with relational databases, emerging proficient in SQL. I gathered knowledge about the application of software to business and financial problems. Around this time I became entangled with Eclipse Platform which I still use.

I was involved in embedded software development in the automotive industry. With that came the knowledge about real-time systems in general, automotive operating systems (OSEK, AUTOSAR-OS), embedded architectures (V850E, S12X, PPC, TriCore), automotive communication buses (CAN, FlexRay). This taught me programming with very restricted runtime-resources and massive quality assurance measures. I have set up rest-bus simulations, analysed electronic signal flows and acquired a driving licence for in-development car prototypes.

Throughout my professional life I have been more or less involved in system administration. I have never dealt with a large network involving thousands of users, server farms or supercomputing clusters. However, my share gave me a sure footing with workstations and servers, knowledge about UNIX internals, ability to set up operating systems from scratch and operate various servers (mail, web, database), and intimacy with all major network protocols.

During my days at the university I have extensively used Mathematica on my own (it was not required for courses) because I was fascinated by the tool. I have also developed a strong liking for the programming language ADA, but have never had a chance to use it professionally.

Professional Background

Education

- In April 1992 graduated as electronics technician, fourth degree, at the Secondary School for Electrotechnics "Jaroslav Černi" in Sarajevo, Bosnia.
- Beginning March 1994, studied applied computer science at the University of Applied Sciences in Frankfurt, Germany. Study cancelled due to time constraints imposed by work.
- Since October 2003, studying mechatronics at the Private Remote University of Applied Sciences in Darmstadt, Germany. Stalled due to time constraints imposed by work.

Certifications

- IBM Certified Associate Developer – WebSphere (November 2003)
- Microsoft Certified Professional - .NET (September 2003)
- BMW internal driving licence class B1 and B2

Working History

- March 2009 – dato: Gliwa GmbH, München, Germany
Software developer in research
- September 2004 – February 2009: Volke GmbH, München, Germany
IT-consultant, software developer and system administrator
- October 2003 – August 2004: analytiq consulting gmbh, Offenbach, Germany
IT-consultant and software developer
- April 2003 - July 2003: Dresdner Bank AG, Frankfurt, Germany
Training in risk management, application development
- October 2000 - October 2002: deanet GmbH, Frankfurt, Germany
Software developer
- March 2000 - September 2000: WestLB Systems, Tokyo, Japan
Software developer
- January 2000 - February 2000: Hand GmbH, Wiesbaden, Germany
Software developer
- September 1995 - December 1999: Glück & Kanja GmbH, Offenbach, Germany
Software developer

Spoken Languages

- Croatian, Serbian - mother tongue
- English - fluently spoken and written
- German - fluently spoken and written
- Japanese - basics

Work Experience

The following projects I have been, or still am, involved with. They appear in chronological order, based on the start date. Note that some projects overlap with others. That means that they have been done, or are being done, at the same time.

- **ComHandler**

July 2011 - dato, BMW Research and Innovation Centre, München, Germany.

Implementation of ComHandler, an AUTOSAR component which plays the role of an abstraction layer for communication in BMW's AUTOSAR architecture. ComHandler is deployed on major ECUs in the area of lateral dynamics and driving assistance systems (includes safety-critical functions).

Responsible for the implementation and release management of the ComHandler component. ComHandler is implemented in C. It is partly written by hand, partly generated from the AUTOSAR network description (ARXML source).

- **T1 flex**

Jul 2009 - October 2009, Gliwa GmbH, München, Germany.

Porting of Gliwa's T1 flex product to the embedded architectures V850E and TriCore. T1 is a product line for measurement and analysis of the real-time behaviour of embedded software.

Responsible for the implementation and test of the T1 flex product on the V850E and TriCore architectures.

Acomplished using C and Assembler for the said architectures.

- **Software Architecture & Real-Time Measurements**

March 2009 - June 2011, BMW Research and Innovation Centre, München, Germany.

The development and implementation of the build environment for integrated chassis management.

The measurement and analysis of the real-time behaviour of the software components for longitudinal and lateral dynamics.

Responsible for the design, implementation and test of the Eclipse-Based build environment. Eclipse CDT toolchains for Green Hills, Metrowerks, Diab and TASKING compilers implemented in Java on Eclipse Platform.

Real-time measurement and analysis done using Gliwa's T1 product line. This involved the instrumentation and adaption of the ECU code in C.

- **Active Steering**

Oct 2005 – Feb 2009, BMW Research and Innovation Centre, München, Germany.

The development of the embedded software for the active steering components for the upcoming BMW 7, X6 and 5 series. The task involves the development of software for two ECUs, for the front and the rear axis, each containing two distinct micro-controllers. This project has received the Bavarian Innovation Award in June 2006.

Responsible for the design, implementation and test of the software components for non-volatile storage, ECU diagnostics, series coding and restbus simulation.

ECU software implemented in C, restbus simulation in CAPL; used MatLab, CANoe.Flexray, CM-Synergy, Lauterbach Debugger, Eclipse CDT.

- **Webs**

Aug 2005 – Feb 2009, Volke GmbH, München, Germany.

This project saw the redesign and reimplemention of company's intranet and internet sites. The

project remains active in maintenance mode.

Responsible for the design, implementation and maintenance of the software components involved in the respective website.

Advanced to system administrator for the company's network.

Implemented in Java, XML, XSLT, DHTML; used J2EE (Jonas), PostgreSQL, Apache Xalan, Eclipse.

- **GPIO Driver**

May 2005 – Jul 2005, Volke GmbH, München, Germany.

The development of a kernel-mode driver and a user-mode library for accessing and using the GPIO controller in the Winbond W83602R chip. This chip is connected to the SMBus on motherboards used in Volke's embedded hardware.

Responsible for the design, implementation and test of the driver and library software on Windows XP.

Implemented in C; used Windows WDM, Windows DDK, Eclipse CDT.

- **Human-machine interface methodics**

Jan 2005 – Apr 2005, BMW Research and Innovation Centre, München, Germany.

This project has seen the birth of a methodics for specification of the graphics elements in human-machine interfaces (codename Saimaa).

Co-work on the design and implementation of Saimaa methodics

Implemented in SVG, ECMAScript, Java; used Adobe SVGV, Apache Batik, Eclipse.

- **Vehicle Reservation**

Sep 2004 - Dec 2004, Volke GmbH, München, Germany.

This project is a part of a larger web-based suite used internally at BMW Research Centre. The reservation component is used for booking and tracking of test vehicles.

Responsible for the design and development of the reservation component.

Implemented in Java, XML, XSLT, DHTML; used J2EE (WebLogic), Oracle.

- **nitrobit group policy**

Apr 2004 - Aug 2004, analytiq consulting gmbh, Offenbach, Germany.

nitrobit group policy is an administrative tool which enables the application of the Windows group policies through Samba and OpenLDAP servers.

Involved in various activities.

Implemented in C++; used OpenLDAP and Samba.

- **Automotive Collaboration**

Feb 2004 - Mar 2004, Cisco Systems GmbH, München, Germany.

Automotive Collaboration is a technological study for use of WiMAX in vehicles, done in cooperation with the automotive industry.

Responsible for the migration and integration in the web-based portal for the customer service.

Implemented in C#, used ASP.NET, SharePoint, Cisco IP Telephony.

- **Domain & site setup**

Oct 2003 - Jan 2004, analytiq consulting gmbh, Offenbach, Germany.

Domain server setup for a newly founded company, website setup.

Responsible for the domain and user setup, security implementation, website design and implementation, site administration.

Acomplished using Linux, OpenSSL, X509, XML, XSLT, Apache, Sendmail.

- **CryptoEx Toolkit**

Aug 2003 - Sep 2003, analytiQ consulting gmbh in Offenbach, Germany.

The CryptoEx Toolkit is a script component for key management, encryption and digital signature with X509, S/MIME and OpenPGP.

Responsible for the design of the object model, development, test, documentation.
Implemented in C++; used COM+, ATL.

- **Risk Exposure Management System (REMS)**

Apr 2003 - Jul 2003, Dresdner Bank AG in Frankfurt, Germany.

REMS is a part of the internal risk management, aimed for complex risk analysis.

Responsible for the development and test of a web-based interface for generation of reports and charts which visualise risk analysis data.

Implemented in XML, XSL, SVG, Java; used Tomcat, Xerces, Xalan, FOP, Batik.

- **DigitalDentist**

Apr 2002 - Sep 2002, daenet GmbH in Frankfurt, Germany.

DigitalDentist is a management system for dentists and the dental laboratories.

Responsible for the design and implementation of the smartcard interface, co-work at the core development.

Smartcard interface implemented in C; used CT-API.

- **SADB / SalesAdmin**

Dec 2001 - Mar 2002, iesy Hessen GmbH & Co. KG in Mainz, Germany.

SADB is a database used by the cable network provider for the management of customers and products. SalesAdmin is a web-based frontend for SADB.

Responsible for the design and implementation of SADB and SalesAdmin.

Implemented in C#; used ASP.NET, Microsoft SQL server.

- **libxml**

Summer 2001 - dato, open source community.

Libxml is a general-purpose XML processing toolkit. It is used worldwide in many well-known project, such as GNOME desktop.

Responsible for the port to the Windows operating system.

Implemented in C.

- **e-Logistics**

Feb 2001 - Nov 2002, daenet GmbH in Frankfurt, Germany.

e-Logistics is a web-based B2B logistics portal.

Responsible for the design and implementation of the PDF generation components; co-work on the core development.

Implemented in C#; used ASP.NET, Oracle.

PDF components implemented in C.

- **FAQ Server**

Oct 2000 - Jan 2001, daenet GmbH in Frankfurt, Germany.

FAQ Server is a system for quality and information management.

Responsible for the design and implementation of the XML-based backend.

Implemented in C, C++; used libxml, COM.

- **WSP Preconfirmation System / EALP**

Mar 2000 - Sep 2001, WestLB Systems in Tokyo, Japan.

The WSP preconfirmation system is used in stock-trade for allocating purchased stocks across customer's accounts. EALP is a numerical algorithm which does the allocation math.

Responsible for the design, implementation and test of the WSP; design and implementation of EALP.

WSP implemented in C++; used DBLIB, Sybase.

EALP designed with Mathematica, implemented in C.

- **OPTOIN Device Driver**

Jan 2000 - Feb 2000, H.A.N.D. GmbH in Wiesbaden, Germany.

OPTOIN is an industrial interface hardware. It was used for connecting the computer and the radar in the company's flight-control and radar data analysis software.

Responsible for the design, implementation and test of a device driver for OPTOIN cards on Solaris.

Implemented in C; used Solaris DDI, DKI.

- **CryptoEx**

Sep 1995 - Dec 1999, Glück & Kanja GmbH in Offenbach, Germany.

CryptoEx is a program for encryption and digital signatures, at that time limited to electronic mail. Today it is a comprehensive security suite. CryptoEx became the title "Packaged Application of the Year" from Microsoft.

Responsible for the design and implementation of the CryptoEx technology, CryptoEngine concept, Outlook-plugin; the design of a smartcard-interface.

Implemented in C++; used PGP, S/MIME, MAPI, CryptoAPI, PC/SC.

- **Eco WM**

Mar 1995 - Sep 1996, University of Applied Sciences in Frankfurt, Germany.

Ecological Washing Machine was a university research project, done in cooperation with Whirlpool and Bauknecht. It was a base research on developing a laundry automat with a neuro-fuzzy controller which can optimise the usage of resources based on chemical analysis of the water during the washing process.

Responsible for the programming of the neuro-fuzzy controlling software.

Implemented in C++; used I-DEAS, MEAS 3, EDM 483I.