

General Information

Name: Muharem Hrnjadovic • **Education:** master's degree in computer science (Diplom-Informatiker Univ.) from the University of Passau in Germany

Age: 43 • **Marital status:** married • **Nationality:** German • **Languages:** English (fluent), German (perfect), Bosnian (mother tongue), French (basic)

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Career objective

Having a passion for technology and holding a technical leadership position I am seeking a challenging and exciting opportunity in the information technology field.



General skills

- conceptual and strategic thinking, technological sense-making
- Strong (and proven) problem solving skills
- Strong skills and instincts in the area of system and software architecture
- over a decade of experience in software development and engineering

Professional certifications

Certified MySQL 4 Professional (MySQL 4 core and professional certification), Sun Certified Programmer for Java 2 Platform

Operating systems

Linux, various UNIXes, various Windows flavours

Languages

Python , C++, Java, C, Perl, SQL, PHP, HTML, XML

Tools

Eclipse, Komodo, IntelliJ IDEA, Sybase PowerDesigner, Together5, Rational Rose, Dreamweaver, Fireworks, Jbuilder, JProbe, ClearCase, Apache

Methodologies/notations

XP, RUP, UML, Booch

Frameworks, libraries

Hibernate, STL, RogueWave

Databases

PostgreSQL, MySQL, Sybase ASE 12.5.1, Oracle, Microsoft SQL Server

Graphical User Interfaces

X-Windows, Motif, OpenLook

Additional know-how

J2EE, JMS, servlets, CGI, CORBA

Weblog

You may also be interested in my [weblog](#) (with articles on the [Python](#) programming language).

Professional Interest

My general area of interest is the construction of industrial strength software systems. I am currently reading about:

- [High performance MySQL](#)
- [Agile Web Development with Rails](#)
- [Dive into Python](#)
- [Strategy and strategic learning](#)
- [Mining the Web](#)

Professional Experience

12.2005 – present, Corvil Ltd., Dublin, Ireland

Principal Engineer

Member of the engineering team that is designing Corvil's next generation product. Roles and activities:

- Information modelling, preparing decision input information on the choice of the RDBMS
- Design of the database schema and administration of the PostgreSQL RDBMS
- Participation in architectural workshops

Skills: PostgreSQL, Python, information modelling, SQL, relational databases, OO design, Java, Spring

08.2003 – 12.2005, LM Ericsson Ltd., Athlone, Ireland

Principal Engineer (reporting to the head of the product development unit (PDU) "operations support systems (OSS)")

Member of the PDU's management team, providing technical direction by

- advising on technology as well as on PDU strategy and strategy finding process
- analysing key technical issues and spearheading the resolution of these (includes architectural analysis and refactoring of major systems)
- mentoring of technical teams (especially regarding architecture centric engineering)
- leading the re-architecting of the persistence tier for Ericsson's 3G radio access (sub)network (RAN) manager. Activities:
 - development of an overall architectural vision for the 3G RAN (sub)network manager
 - architecting and prototyping of the persistence tier consisting of a RDBMS, a message bus and an OO persistence framework
 - development of logical and physical database models

Skills: OO design, Java, Perl, XML, UML, SQL, relational databases, distributed system architecture and design, enterprise application architecture, radio access and mobile networks, Hibernate O/R mapper

10.2000 – 07.2003, Corvis Corporation, Columbia, Maryland, USA

05.2002– 07.2003: System architect (NE Management) (reporting to director of system engineering and senior director of engineering (Baylight Division))

Roles/activities:

- analysis and definition of system level requirements
- devising of architectural solutions
- mentoring of design teams (on system requirements and architecture)
- ongoing involvement with both hardware and software design teams in order to ensure that the chosen solutions are practical, efficient and fulfill the system requirements
- technical conflict resolution between design teams and final authority in architectural issues

Skills: Distributed system design, UML, CORBA, CMISE, SNMP, transmission networks, ITU-T recommendations, series M, G, X

10.2000 – 05.2002: Technical section leader (reporting to director of software and to manager, SONET applications (Baylight Division))

Responsible for the equipment management subsystem of the CorWave OCS which is a distributed system with redundant and multiprocessor components. Roles/activities:

- leading a team of three software engineers
- requirements clarification, architecture and initial analysis/design
- development of concepts and architectural solutions for the system startup and the redundancy logic of the main control processor
- delivery of the following features: startup on component and system level, various equipment redundancy schemes, equipment state and presence monitoring

Tools/platforms: C++, STL, UML, Together 5, Perl5, Microsoft Project, Windows NT; ITU-T recommendations, series M, G, X

01.2000 – 10.2000, Ericsson, Athlone/Ireland

Software architect (reporting to technical coordinator and to project manager)

Analysis, design and implementation of an off-switch client/server traffic measurement system with soft real-time properties. Roles/activities:

- responsible for the architecture of the off-switch part of the traffic measurement system
- Requirements analysis, architecture and high-level design
- Prototyping and architecture validation (esp. with regard to the performance constraints/aspects of the traffic measurement system)
- Decision support for implementation language choice (C++ vs. Java), support for Java adoption
- (Support for) work package breakdown and initial effort estimates
- Coaching/mentoring of various teams working on the project
- (Support for) integration of Java applications with the Windows service control manager (SCM)

Tools/platforms: Java, CORBA, UML, XML, C++, STL, Rational Rose 2000 (Enterprise edition), Windows NT

05.1999 – 11.1999, Nortel Networks, London/UK

Senior engineer (reporting to project manager)

Alarm to trail correlator component (“root cause” and “services affected” analysis) of a network management system, project roles:

- advising/leading team of three
- requirements engineering, business case preparation support for project and portfolio managers
- OO analysis, architecture and design for the entire correlator component, rapid prototyping and implementation of the correlator core and generic components

Tools/platforms: ITU-T recommendations, series M, G, X; UNIX, C++, STL, UML, Perl, X11, CORBA; Rational Rose, FrameMaker

10.1998 - 05.1999, OmniNet GmbH, Nuremberg/Germany

Senior engineer (reporting to project lead)

client/server-system (2 clients, 1 server) for online booking of tickets, project roles:

- requirements engineering (customer facing) and architectural work (system level)
- architectural concepts/design on the client side, responsibility for one of the clients
- advising/leading team of six
- responsibility for generic parts of the clients e.g. design and implementation of a "functional layer" offering business process oriented functionality to the GUI layer

Tools/platforms: Windows98/NT, RationalRose 98, UML, MFC, STL, Microsoft Visual Studio/C++, Microsoft SQL Server, Perl

02.1996 - 10.1998, Alcatel SEL AG, Stuttgart/Germany

Senior engineer

Object-oriented analysis and design of agent software for a digital cross-connect. Roles:

- coaching of Alcatel-employees
- OO analysis/design of the cross-connection manager component
- analysis/technical feasibility assessment of the off-line configurability feature of the system
- OO analysis/design of a three stage CLOS matrix switching diagnosis tool
- OO analysis/design of a context preservation framework (“memento” design pattern)
- OO analysis/design of a three stage CLOS matrix switching resource pool mechanism (for multicasts and protections)

Tools/platforms: ITU-T recommendations, series M, G, X; OOA/D (Booch method); Solaris/Linux, C++, STL, Perl; Rational Rose, InterLeaf

06.1995 - 02.1996, Telekom AG, Darmstadt/Germany

Senior Engineer

Object-oriented analysis and design for the workstation function (WSF) of a Telecommunications Management Network (TMN) for a SDH-based transmission network. Roles:

- review and quality assurance of technical concept papers delivered by other companies (subcontractors) involved in the project
- coaching of Telekom-employees
- development of prototypes

Tools/platforms: ITU-T recommendations, series M, G, X, Q; Jacobson use cases, OOA/D (Booch method), UNIX, C++, X11, Motif; Rational Rose, FrameMaker

06.1994 - 06.1995, Compaq Computers (European HQ), Munich/Germany

Software Engineer

Database back end software specification and client software design for a product pricing system capable of displaying and manipulating a product tree through customizable views

Tools/platforms: Compaq PCs, MS-DOS/Windows, SCO UNIX, C++, Perl, PowerBuilder, Sybase

09.1993 - 06.1994, Siemens Nixdorf AG, Munich/Germany

Software Engineer

Design and implementation work on a Service Control Point (SCP) component (part of a switching system for SS7-based Intelligent Networks (IN)), topics:

- high availability systems (computer clusters)
- OMNI-platform
- Distributed Lock Management

Tools/platforms: Pyramid MI-Server, SNI MX-600, SYS5R4, X-Windows, Motif, C/C++, Perl; Standards: Q.771, Q.711; SS7-Layer: SCCP, TCAP

07.1992 - 09.1993, Philips Kommunikations Industrie, Nuremberg/Germany

Software Engineer

Object-oriented design and implementation of a Network Management System (NMS) component displaying the topology of a Synchronous Digital Hierarchy (SDH) network

Tools/platforms: HP-Appollo 715, Unix, X-Windows, Motif, HP Open View, C++, Perl; Standards: G.803, X.710, M.3010

01.1991 - 02.1992, University Of Passau/Germany

Graduate student

Design and implementation of hierarchical layout-algorithms for directed graphs (master thesis)

Tools/platforms: Sun SPARCStation 1+, UNIX, X-Windows, C++

08.1990 - 12.1990, Ixtra GmbH, Munich/Germany

Software developer

Development of an object-oriented graphical information system for the chemical industry

Tools/platforms: Sun, UNIX, X-Windows, C++

08.1989 - 12.1989, ICT GmbH, Munich/Germany

Software developer

Design and implementation of a communication and synchronization concept for a multiprocess system using UNIX IPC constructs (semaphores, shared memory)

Tools/platforms: Sun 3/260, UNIX, C