

## Miloš Cvetanović

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### Summary:

- Bachelor of Electrical Engineering with 6+ years of software system design and implementation experience based on OOD, UML (RUP), and design patterns
- Extensive experience in the relational database design and development (Oracle 9.x, SQL Server), and in-depth knowledge of distributed software development (CORBA, RMI, EJB, JMS, XML) on Windows and Linux/Unix operating systems, with special emphasis on Enterprise Application Integration with BEA software (Web Logic, Tuxedo)
- Strong Integrated Product and Process Development based on CMMI methodologies related to Integrated Project Management (IPM), with 1+ years of establishing estimates and defining project life-cycle phases upon which to scope the planning effort
- Excellent communication and interpersonal skills with a demonstrated ability to interface confidently and effectively with all organizational levels
- Highly motivated with the desire and flexibility to work in a fast-paced environment and the ability to consider new technologies which can contribute to the team productivity

### Work Experience:

#### **IT Consultant, Belgrade/Serbia**

**1/2003 - Present**

Working on projects related to the system integration. Offering consulting services related to corrective or perfective maintenance or retargeting existing application. Especially dealing with workload characterization in order to properly benchmark and decide among possible solutions.

#### **Application Integration**

- Telecommunication company project related to the Integrated Order Management system. System was based on the BEA WebLogic application server, integrated with existing MQ Series server used for a Wholesale, Ordering and provisioning system running on a Solaris system.
- Proprietary Document Management System integration project. Software components and services written in Borland C++ for Windows were retargeted for Slackware 9.0 and database redesigned and tuned for Oracle 9i and PL/SQL procedures.
- Implementation of a novel layered security architecture for sports bidding system consisted of federated database system (SQL Server instances). Independent branches (running Windows 2000) exchange data via semi-permanent connection. Monitoring and reporting system fully implemented in C++ and Windows Management Instrumentation (WMI).
- Middleware software development that had to satisfy the needs of the Czech Bank with distributed infrastructure and numerous legacy components. Adapter written in C++ should advertise BEA TUXEDO services through implementation of CORBA Object Manager using VisiBroker running on a HP-UX system.

#### **Project and People Management**

- Supervised and coordinated all aspects of hardware and software design and development for Handheld Survey Devices. System is intended for wide range of applications in Market research (media research, focus groups, etc.) Responsible for planning, recruiting, monitoring and controlling risk analysis and supplier management. Supplier management involved procurement of LCD panels, device cases, and IR modules from foreign suppliers. Planning involved initial assessment and project proposal development as well as product development that include both hardware and software design. Staff recruitment involved interviewing candidates after thorough analysis of their past projects. Monitoring and controlling involved close participation in every aspect of development and verification of mile stones in project plan. Risk analysis involved detections of potential risks due to the difficulties with foreign payments and shipments as well as the submission for patent approval and their possible violations.

#### **Low Level (Device) Programming**

- Project dedicated to graphic card GeForce 2 MX device driver development under Plurix operating system. Documentation related to the GeForce chip was unavailable in the time of project, so any information about register specification had to be gathered with special methodology for Dynamic Reverse Engineering, which was developed

during this project. Plurix OS is ongoing project at the University of ULM, Germany. More details are available only with Non-Disclosure agreement signed with the University of ULM.

- Project in which Windows 2000 virtual COM port kernel driver was developed. Driver is intended for communication with PEG device (Personal Electronic Guide). Details about this project are available with the CSIDC 2002.
- Project in which Windows 2000 USB kernel driver was developed for secure access to the data storage device. More details are available only with Non-Disclosure agreement signed.

**Teaching Assistant, Faculty of Electrical Engineering, Belgrade/Serbia** **2/2003 - Present**  
Department of Computer Engineering and Computer Science, Faculty of Electrical Engineering - Belgrade University.  
Responsible for lectures and lab exercises related to database design and development, transactional and fault tolerant software systems.

**Computer Assistant, RTV Station, Vranje/Serbia** **4/1999 - 7/1999**  
Radio Television Vranje (RTV) is the local radio and television network. Designed and assembled video-editing computer system with Amiga 4000 in its core and a series of genlocks and video mixing devices. Created animations in 3D Studio (also used Lightwave) and used Scala Multimedia for live broadcasting.

### Publications:

**Implementation of a Solution for Software System Integration** **11/2005**

**Authors:** Miloš Cvetanović and Zaharije Radivojević;

**Presented at:** TELFOR XIII, Belgrade/Serbia;

**Summary:** Software system integration represents integration of various types of application within a company in order to share information and processes. This paper presents a novel methodology based upon principles of reverse engineering. For the purpose of verification the real life case study had been analyzed. Example consists of customer relationship management subsystem on one side and enterprise resource planning subsystem on the other. Benefits of the presented solution were analyzed and possible amendments have been given.

**Data Mining: A Brief Overview and Recent IPSI Research** **12/2003**

**Authors:** Zaharije Radivojević, Miloš Cvetanović, Veljko Milutinović, and Joerg Sievert;

**Published in:** Annals of Mathematics, Computing & Teleinformatics, Vol.1, No.1, pp.84-91;

**Summary:** Information extraction from large amount of data is the problem addressed in this paper. Efficient usage of data mining models and algorithms will be presented using the recent IPSI research as a case study. A novel algorithm based on the K-nearest neighbor model has been developed. The algorithm is general enough to be considered as a common solution for a group of similar problems. On the other side, it is a good example on how data mining techniques could be efficiently used for reverse engineering problem types.

**Data Gathering Phase of the Dynamic Reverse Engineering** **9/2003**

**Authors:** Zaharije Radivojević, Miloš Cvetanović;

**Presented at:** IPSI Conference, Sv.Stefan, Montenegro;

**Summary:** Currently available systems for dynamic reverse engineering do not have the satisfying quality. Therefore, it is necessary to set the assumptions needed to bring a new methodology which would cover all of the existing solutions. Entire analysis presented in this paper was based on a study of graphic mode initialization of the GeForce GPU. Utilization of 2D acceleration functions, and also all relevant details related to 3D acceleration functions were included.

**Architectural Investigation of XCTL by URCA** **8/2003**

**Authors:** Miloš Cvetanović, Dragan Bojić;

**Presented at:** The 4th Workshop on Software Engineering and Reverse Engineering, Ohrid, FRY Macedonia;

**Summary:** URCA is an abbreviation for the Use case Design Recovery by means of Formal Concept Analysis. In other words, it is a method for software Architecture Recovery. The method is actually able to recover all mandatory elements of the Rational Unified Process model. This in turn includes both, use case view and design view of the model. Presented method incorporates static and dynamic analysis. Static analysis gives us basic model elements of a system. On the other side, behavioral aspects are discovered by dynamic analysis, while class hierarchies, relationships and roles are outcomes of the concept analysis.

## **Security Architecture of the Distributed System - Layered Approach**

7/2003

**Authors:** Miloš Cvetanović, Zaharije Radivojević;

**Presented at:** SSGRR Conference, (ISSN: 88-85280-74-9), L'Aquila, Italy;

**Summary:** Architecture of a security subsystem is a very important aspect of any computing infrastructure. Therefore, it is not unusual practice to dedicate special attention to problem addressed in this paper. Modern attack techniques require new theoretical model for their elimination. Layered approach incorporated with metadata promises easy extensibility, flexibility and above all reliable security.

## **Reverse Engineering: Dynamic Analysis - Data Gathering Methodology**

1/2003

**Authors:** Miloš Cvetanović, Zaharije Radivojević, and Veljko Milutinović;

**Published at:** YU Info, Belgrade, Serbia;

**Summary:** Having in mind that from 50% up to 75% of time during life cycle of software, is spent on software maintenance, from which almost 80% on program understanding, it is not difficult to conclude that reverse engineering has great importance. The papers include concrete suggestions related to the methodology of data gathering, which is one of the phases during dynamic analysis, sub branch of the reverse engineering.

## **E-Success on the Internet**

3/2002

**Authors:** Miloš Cvetanović, Andreja Cvetanović, and Veljko Milutinović;

**Published in:** E-Business and E-Challenges, IOS Press (ISBN:1 58603 276 3), ;

**Summary:** Paper encloses considerations and analyzes of best practices of the most successful companies in the field of electronic business on the Internet. This paper was presented on numerous conferences, and after great number of iterations which contributed to its perfection, was published as a chapter in the E-Business and E-Challenges book.

## **Education & Professional Training:**

6/2005, CMMI Certificate, Booz Allen Hamilton;

1/2003 - present, Joint PhD and Masters of Computer Engineering And Computer Science, Belgrade University - Faculty of Electrical Engineering, Belgrade;

9/1997 - 1/2003, Bachelor of Computer Engineering And Computer Science, Belgrade University - Faculty of Electrical Engineering, Belgrade;

## **Skills:**

**Programming Languages,** Java (J2EE), C++, C, C#(.NET), x86 Assembler;

**Specific standards and API's,** CORBA, RMI, EJB, JMS, JTA, UML, XML, XSLT, Structs, JSP, SOAP, BPEL;

**IDE,** Eclipse 3.1, J Builder 9 Ent., MS Visual C++ 6.0, MSVS .NET 2005, Watcom C/C++ 11.0, Borland C++ 5.0, MASM 6.0;

**Databases,** SQL-99, JDBC, Oracle9.x, SQL Server 2000, Erwin 4.1, TOAD, Hibernate, ER Studio 6.6.1, DBArtisan 8.1;

**Other software,** Tuxedo, WebLogic, Rational Software (Rose, ClearQuest, ClearCase, RequisitePro , Purify), JBoss, MQSeries, BPWin, SoftICE, IDAPro;

**Hardware design,** Altera MAX II Plus 8.0, Active-VHDL 3.2, ORCAD 9.1, Protel 99SE;

**Operating Systems,** Windows (NT 4.0/2000/XP/2003), Solaris 10, HP-UX 11.0, Linux (Slackware9.0, Red Hat);

**Graphic design,** Adobe Photoshop 7.0, Lightwave, 3D Studio, MAX 3D, GIF Animator, Scala Multimedia;

## **Languages:**

**English,** Fluent - Full Knowledge;

**French,** Conversational - Basic;

**Serbian,** Fluent - Full Knowledge;