

Project database

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1. Design and develop auxiliary tools for quality assurance

Designed, planned and developed more Java independent programs to simulate the customer mobile planning tools, in a regressive quality assurance environment.

The suite consists in more part, each of them designated for a certain test tool: A JDBC CSV driver was developed in order to change CSV file sets. The start point of the development was the xlsql driver, adapted to support a larger variety of CSV sub-formats. A framework to change MCCM files and their derivate, used by a leading German phone company, based on XPath queries and DOM XML parsing. A command line tool to compute a MCCM planning tool output file, based on two different stages. The tool computes the transition between the two stages and sets the MCCM modifiers. A command line tool to simulate the KMS planning tool delta output. The delta is computed based on initial and current stages. A command line tool to change the Netcop/TNPC format file using an SQL statement.

Technologies: Eclipse 3.1, ClearCase, Java, XML, jdom, DOM, XPath, JDBC, JDBC driver development, MCCM, KMS, Netcop, TNPC, log4j

Date: 2006-2007

Company: Software Ingenieurbüro Popovici, contracted to Siemens Networks GmbH / Siemens AG

Role: Software Developer / Quality assurance engineer

2. Reporting features for the application UserBooster Professional

Projected and developed a module for adding build-in and custom reporting capability to the UserBooster Professional product of maxcrc GmbH.

Designed a reporting module to be able to offer build-in reporting system, capability to extend the reporting capabilities without changing the main software. Also a background function, scheduled by a Windows Service allows the user to repeatly generate the reports, on a scheduled basis.

Technologies: Visual Studio 2005, Crystal Reports, MFC, COM, COM interface to Crystal Reports, COM interface to Database using OLEDB, COM interface to MSXML, ProfUIS, XML, MSXML, MS SQL Server Stored Procedures, MS SQL Server 2000, MS SQL Server 2005, Subversion

Date: 2006

Company: Software Ingenieurbüro Popovici, contracted by maxcrc GmbH

Role: Software Architect, Software developer

3. Count cells in microscopic pictures

The software helps counting the cells in the microscopic pictures.

The software was used in the project "Protektion retinaler Ganglienzellen nach traumatischer und ischämischer Schädigung durch die Neuropeptide NAP und ADNF-9" on the University Clinic Freiburg in order to interpret the microscopical pictures.

Technologies: Java 1.6, Java Swing, Netbeans
Date: 2006
Company: Clinical University Freiburg - Neuroophthalmologie Section
Role: Software Architect, Software developer

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4. Practical examination for Sun Certified Java Developer

Due to certification conditions of the Sun Microsystems company, the content of the assignment will not be disclosed.

The application is a Swing GUI, a network server and a direct file access client.

Technologies: Java 1.5 SE, RMI, UML, ArgoUML, Eclipse UML Studio, Eclipse, Swing, JUnit, Swing Unit, Ant, Metrics - Statistical analyze of the java sources., Javadoc, Emma - Coverage reports, Subversion
Date: 2005
Company: Private
Role: Developer, Software Designer

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5. Design of the own corporate website

With a given corporate design, integrate more content sources in a uniform format.

The web site is designed to be accessed by company's customers, searching for similar projects in order to contract my services. With a given HTML design and the content stored in XML files, respectively JPG images, I have generated the offline HTML files using Jostraca, an offline HTML generator. The flow and the hierarchical presentation of the web application is modeled in a java program.

Technologies: Eclipse 3.1, Java, XML, jdom, Subversion, Jostraca, Gimp, Gimp automation
Date: 2005
Company: Software Ingenieurbüro Popovici
Role: Software Developer / Web developer

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6. NS-API plug-in for authentication

Change an HTTP request, before it reaches the customer's web application layer, in order to implement a certain method of authentication.

To prevent a change in the Web Application, it was implemented an alternative authentication method, directed on a NS-API based plug-in of the Sun Microsystems company. Changes were accompanied by a performance test.

Technologies: Sun One Web server, C, NS-API, Jakarta JMeter, Subversion
Date: 2005

Company: Software Ingenieurbüro Popovici, Customer: Deutscher Paket Dienst KG, Aschaffenburg, Germany
Role: Test engineer, Consultant, Documentation Developer

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7. Performance test for rsync

Tests regarding performance and partially functionality.

After rsync was changed because of an outsourcing project, more tests have been done, regarding performance (network transfer oriented) and functionality. The tests required development of a JMeter plug-in, written in java, for controlling the rsync clients.

Technologies: rsync, Jakarta JMeter, Java
Date: 2005
Company: matrix42 AG
Role: Test engineer

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8. rsync encrypted password file

Another security measure for rsync: encrypted password file.

An external DLL/so, loaded dynamically from rsync, to decrypt the passwords stored in the file. The target was to keep the number of needed changes in the open source rsync project as small as possible; therefore the whole functionality was implemented outside the project, in an extern dynamical loaded library.

Technologies: Linux, Cygwin, gcc, ddd, cryptolib
Date: 2005
Company: matrix42 AG
Role: Developer

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9. Hospital Information System

Design and Implementation of a "Hospital Information System" Database

The customer wanted a database design independent of the database vendor. The design should allow easier future modifications and customizations. The chosen solution was based on Hibernate; therefore most major database vendors are supported. The object oriented design was made with ArgoUML. A template was developed, to allow the POJO Classes described in the UML diagram to be converted in java sources and in Hibernate XML descriptor.

Technologies: UML - ArgoUML, Hibernate, Java, JDBC, XMI, open Generator Framework, Postgresql
Date: 2005
Company: Rataprod srl, Customer: Infoaris srl
Role: Project manager, Architect

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10. Portred

A proprietary Socket Proxy for bandwidth management.

Supports all stream protocols like rsync, HTTP, ssh and FTP, a FTP special parser was developed for data transferring port

Technologies: C++, TCP/IP API, rsync, HTTP, FTP

Date: 2004

Company: matrix42 AG

Role: Developer, Architect

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11. Porting several NT services to Linux

Existing NT services (MFC/C++) were ported to Linux

Teamwork, my responsibilities were: development of a NT service framework, porting of the string operations, simulation of NT registry, inter-process communication and partially native Oracle database access.

Technologies: gcc, ddd, gdb, make, Microsoft Visual C++, Windows NT, 2000, XP, Linux - SLES8, SLES9, Red Hat, Microsoft Visual Source Safe, Oracle 9i

Date: 2003

Company: matrix42 AG

Role: Developer

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12. Partition Editor

A GUI for hard disk partitions editor

Before an unattended installation of the operating system, the user can define the partitioning of the hard disk using this interface.

Technologies: C++/MFC, Microsoft Visual C++

Date: 2003

Company: matrix42 AG

Role: Developer

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13. Dependency checker

A quite big number of software packages have dependencies. The application checks the consistency of each dependency, and then checks the consistency of the installation requests for

each computer in the managed network.

The dependencies are defined in the following format: Tax2005 needs (Adobe Acrobat Reader 6.0 or Adobe Acrobat Reader 5.0) and MDAC and not Tax2004. The program checks if the invalid dependencies are defined, like package P1 needs package P2 and package P2 should not be installed together with P1. It also checks the installation orders, for each computer or organisational unit, if all dependencies are satisfied.

Technologies: Crystal Reports, C++/MFC, Microsoft Visual C++, MS-SQL 6.0, 2000, ODBC, Oracle 9i, Tree and graph Analyze, Boolean Algebra

Date: 2003

Company: matrix42 AG

Role: Developer

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14. Empirum Sync

Enhancement of a tool for file synchronization

The product is divided in three modules: a NT service which performs the actual file synchronization, a tool to schedule and define the tasks, and a monitoring application, which displays the current state of each job.

Technologies: C++, NT Service, Novell Netware, Visual C++, TCP-IP Client/Server, FTP, Registry monitoring, Scheduling

Date: 2002-2003

Company: matrix 42 AG

Role: Developer

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15. Crystal Reports Integration

Application printer capability over Crystal Reports

Crystal Reports was integrated in Empirum Pro, a console management tool developed by matrix42 AG. To demonstrate the integration capability, more reports were developed, regarding hardware inventory, software licensing and installation reports. Also, the customers can build their own reports or can hire matrix42 consultants to write the reports for them. The product functions with MS-SQL and Oracle, using ODBC. The integration was presented at CeBIT 2002.

Technologies: Crystal Reports, SQL, Crystal Reports Document Object Model, Microsoft SQL Server, Oracle 9i, ODBC, C++, COM

Date: 2002-2003

Company: matrix 42 AG

Role: Developer

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16. Empirum Management Service Provider (MSP)

The product tunnels more protocols, like FTP, SMB, VNC remote control, MS-SQL over HTTP(S)

The product has two parts: a gateway service, which runs in the local area network, and a WEB Server, who is placed on the Internet. All gateways are connected on the web server and exchange data using HTTP(S) only. The whole product is written in Java.

Technologies: Java, HTTP, HTTPS, TCP-IP, Tunneling, Servlet, Service, Daemon, Java Service, Tomcat, Apache

Date: 2001-2002

Company: matrix 42 AG

Role: Project manager and Architect

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17. Empirum Digital Rights Management (DRM)

The product is a big collection of DRM tools. DRM-Internet consists of two parts, first is a virtual drive which can store data and only allows certain applications to read and write files on the drives. The second part is a software rent shop. Customers are paying not for a classical "eternal" license, but for the time of usage. DRM-LAN is a system designed for corporate usage, it disallows usage of certain Applications (like games), even if they are renamed.

The NT-device driver was developed with Microsoft Visual C++ and DDK (Driver Developer Kit). If a customer buys and downloads an MP3 file, but his/her usage license only allows hearing of the song then the user will not be able to save the file to the classical hard disk, therefore he/she will be unable to re-distribute it. The MP3 file will reside on the special drive, where only the MP3 player application can read. The software rent shop makes an internal change to each EXE file which is offered for renting. This change (code injection) computes the usage times together with a service running on customer side. The network surveillance module is a service that inspects the user processes. When a process is found in the "black-list" it will be immediately terminated.

Technologies: C++, NT-Device Driver, NT-Service, Process-API, Windows Device Driver, EXE file Structure, Java, JSP, DDK, Microsoft Visual C++

Date: 2001

Company: matrix 42 AG

Role: Developer

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18. Webacad.de Customer login

Webacad.de is an e-learning system. The project was an integration between an Oracle Database, Hyperwave content management system and ELS (eLearning Suit), to manage the customer logins.

The Web Application is java based. It co-operates with Hyperwave over API functions and with the database with ODBC. The user interface is based on HTML and JavaScript.

Technologies: HTTP load balancing, Hyperwave, Oracle, eLearning Suite, HTML, HTML Forms, Java

Date: 2000-2001

Company: HLP Informationsmanagement GmbH

Role: Programmer

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19. Whois WEB Client

WHOIS WEB Application

The project consists in an ASP web application, calling a C++ written COM Object. The COM module has a database with different Whois-Servers. The server acts as a proxy, for each domain request, it determines the appropriate Whois server, performs the Whois request and then returns the parsed answer to the user.

Technologies: Microsoft IIS (WEB Server), COM, C++, ASP, WHOIS Protocol, Text Syntax Analyze, Text Parse

Date: 2000

Company: Exody e-Business Intelligence GmbH

Role: Developer

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20. NSAPI Module

A NS-API module for web statistics

Exody is the producer of WebSuxess and ShopSuxess. The products are market leaders in building statistical reports about the visitors of a web site or internet based shop. Target of the project was to integrate a Netscape Server web application with company's main products.

Technologies: NSAPI, C++

Date: 2000

Company: Exody e-Business Intelligence GmbH

Role: Programmer

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21. Integration of a web shop with statistics software

Exody is the producer of WebSuxess and ShopSuxess. The products are market leaders in building statistical reports about the visitors of a web site or internet based shop. The project was an integration of web shops "Hybris", "Intershop Enfinity" and "Idea Seller" with comany's products.

Technologies: Intershop Enfinity, Ideal Seller (Catalog-International / Intentia - Denmark), Hybris, Java, C++, COM, PHP, MSMQ, Synchronization technique

Date: 2000

Company: Exody e-Business Intelligence GmbH

Role: Programmer

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22. PHP Internet Shop Statistics

PHP API for Internet shop statistics

A PHP API which allows the PHP programmers to construct a log file with different events in the web Shop, like: customer enters the virtual shop, views a product, and adds it the shopping cart, checks-out and logs off. The log is parsed by a specialised statistics program.

Technologies: PHP 3, Concurrent file access, Semaphore, Synchronization technique

Date: 2000

Company: Exody e-Business Intelligence GmbH

Role: Programmer

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23. Route server

Route 66 - Java RMI Server for street level maps and route planning

A complex Java API and a server used to offer map and route planning solutions on web sites.

Technologies: Java, C++, RMI, RMI-IIOP, GIS, Street level maps, 2D Search Algorithm

Date: 2000

Company: Route 66 srl Romania

Role: Programmer

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24. WAP Application

A WAP application, used to check the highway traffic jams in the Nederland. The project contains a route planner for cellular phones

The solution is based on a Java servlet, acting as a proxy to another server responsible for traffic information. The Servlet runs under Nokia WAP server or alternatively, Apache with JServ module. I have also installed and administered the mobile dial-up central server, based on Linux and GNOKKI, so customers can access the service without being charged additionally by the mobile phone providers.

Technologies: Java, WAP, WML, Nokia WAP Server, GNOKII, Linux, dial-up for mobiles, Apache, JServ, RMI

Date: 1999

Company: Route 66 srl Romania

Role: Developer, Technology architect

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25. Palm pilot street map

A Palm pilot street map application. It can store the contacts in a map-driven environment and allows searching for street names and known locations

A complementary program on PC will send the map to the Palm device. Then, the palm will display the stored maps independently of the main PC. The user can search for street names, contacts, other points of interests (rail stations, hotels, gas stations and much more).

Technologies: Palm-Pilot, PalmOS, C++, OOP, Metrowerks C++, Palm file structure, "Designed for PalmOS" Logo, Palm-PC connection, Visual C++, Speed and used memory optimizations, Flyweight design pattern

Date: 1999

Company: Route 66 BV Nederland

Role: Technology Architect and Programmer

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26. General accounting software

General accounting software, used for Romanian companies or state authorities

The application is a modular accounting application. The user can define more levels of accounts. All modules are seamlessly integrated to reduce user effort.

Technologies: FoxPro for DOS v.1.2 - 2-0 - 2.6, DOS-Printer technology, Database normalization

Date: 1993-1999

Company: Five srl, Contractor, Rata Prod srl

Role: Architect, Designer, Programmer, salesman, support

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27. Diploma printer

The application fills in different type of school diplomas, being able to operate with more printer types.

The application fills in an empty diploma form. In the past, the form was written by hand, this was a very hard work for the school secretaries, because the diplomas are to be filled in aesthetic and without mistakes. This program improves the work output of the school secretaries and offers better work conditions.

Technologies: FoxPro for MS-DOS v.1.2 - 2-0 - 2.6, C++, Advanced MS-DOS printer technology.

Date: 1995-1999

Company: Independent contractor, Rata Prod srl

Role: Architect, Designer, Programmer, salesman, support

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28. Cable TV CRM

A CRM application for a cable-TV company. It works as a CRM system for any company offering subscriber-based services (such as Internet provider, phone company, utilities provider)

In Romania each Cable-TV provider had front desks, where private customers were paying for the provided services. At that time, there was no possibility to pay over a bank account. The application offers a CRM and interacts with the accounting system while also running on the front desk systems. Back office functions are: production reports, printing of dunning letters (overdue bills), general CRM functionality.

Technologies: FoxPro for MS-DOS v.1.2 - 2-0 - 2.6, MS-DOS printer Technology, Database Normalization

Date: 1994-1996

Company: ANALOG CATV SA, RCS SA

Role: Architect, Programmer, Support

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29. Payroll for the Romanian state employee

Application for computing, storing and printing the payrolls

Because of complicated law system, the algorithm to compute the state employee payroll is quite complicated. The resulting detailed reports are two times bigger than the A3 paper format, written with 20CPI (smallest possible for text printers) Courier font. The application is an expert system; it can store and operate in the same time with more than one computing algorithm, each method having a certain time-frame when it applies.

Technologies: FoxPro for MS-DOS v.1.2 - 2-0 - 2.6, Database Normalization, MS-DOS printer technology

Date: 1997-1999

Company: Contractor, Rata Prod srl

Role: Architect, Designer, Programmer, salesman, support

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30. Need evaluator for the workplace in the schools or other state owned enterprises

The application is used in the human resource departments of schools to count the existing and needed workplaces.

Technologies: FoxPro for MS-DOS v.1.2 - 2-0 - 2.6, Database Normalizations, MS-DOS printer technology

Date: 1997-1999

Company: Rata Prod srl

Role: Architect, Designer, Programmer, salesman, support

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31. Audio-TEX

Multi-line telephone answering machine

The system manages more telephone lines. Each incoming call will be answered, a welcome message is played, and then the message of the caller is stored on the hard disk.

Technologies: C++, Linux, Voice Modem, Sound storage

Date: 1998

Company: Rata Prod srl

Role: Architect, Programmer, salesman

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32. Warehouse bookkeeping for electronic components

The application was used on a TV repairing workshop for book keeping of the electronic components. It allows Russian and US-ASCII characters for component names.

Technologies: Database Normalization, C++, MS-DOS INT 21, MS-DOS Interrupts, MS-DOS printer technology, Fox Pro

Date: 1994

Company: Five srl

Role: Architect, Programmer, Support

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33. Simplex Algorithm for Formulas

A Simplex Algorithm being able to work not only with numbers but also with formulas

The system contains a self-made formal computation module, and implements the Simplex algorithm.

Technologies: C++, Formal computation, OOP

Date: 1999

Company: Transylvania University Brasov - Romania

Role: Student

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34. University time table assistant

My graduation project. The application uses a database containing the workgroups, teachers and study plans. Based on the above mentioned information, the system attempts in an assisted mode, to build a timetable for a university department

The application consists of database interfaces and a timetable editor. Second part of the graduation project is a study about implementing the ISO-9001 quality assurance standard in software development companies. During the development phases of the project, the attempt was to comply with the ISO-9001

Technologies: Visual Fox Pro, Relations Databases, Database Normalization, ISO 9001

Date: 1999

Company: Transylvania University Brasov - Romania

Role: Student