

# Curriculum Vitae Heiko Lübbe

## PMP, Interim-Manager, IT Project Manager

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Mr. Lübbe has been working in the IT business for more than 20 years, the last 15 years as freelance IT consultant. He has worked successfully in the areas of management, project management, software development, IT administration, IT testing and IT operations.

Mr. Lübbe is certified as PMP (Professional Project Management by the PMI) and is certified as coach by the CoachingAcademie Bielefeld.

His clients include banks, insurers, government agencies, software houses, Internet companies, telecommunication companies and industrial enterprises.

Mr. Lübbe follows the PMI's code of ethics and professional conduct.

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This CV is also available in German with customer references as [CV\\_Heiko\\_Luebbe.pdf](#).

## Profile

Education	Engineer for Communications, Dipl.-Ing. (FH) Skilled Worker of Electronic
Languages	German (1st language) English (fluent in written and spoken) Russian (school skills) Spanish (basics)
Computer Experience	since 1986 with Unix, as Freelance since 1994
Certifications	PMP, Project Management Professional, PMI 2008 Coach, CoachingAcademie Bielefeld, 2004 Communication Training, CoachingAcademie Bielefeld, 2002 MCSE Windows NT, Microsoft, 1998
Hardware	Sun and Fujitsu Siemens SPARC HP 9000 Serie 700 and 800 IBM RS/6000 SGI Bull DPX 5000 Apple Macintosh IBM PC
Operating Systems	SunOS 4.1, Solaris 2.4, 2.5.1, 2.6, 7, 8 and 9 HP-UX 9 and 10 AIX 3.2 IRIX 5, 6 Linux 2.* BSD 4.3, ESIX V/386 4.0, SPIX 3.1, SCO 3 Mac OS 7 and 8 MS-DOS 6, Windows 3.1, 95, 98, NT 4.0, XP, Vista Windows Server 2003
Programming Languages	Java, J2EE C, C++ Perl 5, Ruby 1.8 sh-, ksh-, csh-Skripte HTML, CSS, JavaScript, CGI, JSP, Servlet
Databases	Sybase MSSQL 7 Oracle 7, 8, 10 MySQL 4, 5 Informix ODBC



Application Server	Bea WLS 5.1, 6.0, 6.1, 8.1 Bea WLE 4.2 (with Tuxedo 6.5 and Bea eLink for Mainframe SNA 3.0, 3.1) Oracle Application Server OAS 4 Apache Tomcat 3, 4 and 5
Messaging	IBM MQSeries 2, 5
Tools	Project Management: MS Project 2002/2007/2010 BETA, GanttProject 2 Revision Control System: ClearCase, SCCS, RCS, CVS, SVN, VSS Tracking: AR System 2+3, Netguide, DDTS, Jira 3+4, ClearQuest, trac IDE: Eclipse Build: make, ant, Maven 2 Test: JUnit, HTTPJUnit, Mercury TestDirector, JMeter Framework: Ruby on Rails 1.2, 2.0
Documentation Tools	Open Office, Microsoft Word Interleaf QuarkXPress TWiki, TikiWiki 1.8, MoinMoin, Confluence 2.6, Sharepoint
Networks	TCP/IP SNA Microsoft-Netzwerke AppleTalk
Experiences	Project management and coordination Leadership Coaching Nearshoring and Offshoring Software Development (Client-Server and OO) Webapplications Modul, technical and performance tests Software installation, administration and build management User support and training Electronic Desktop and Intranet Documentation and document management Data backup Desktop Publishing
Sectors	Banking Financial Service Providers Insurance Providers Telecommunication Software Developmen Public Auhorities Airlines Internet Companies Industrial Concerns

## Projects

### **3/10 – 6/10 JIRA Migration**

Mobile Phone

Merge of three JIRA instances, update to the latest JIRA version and customizing for uniform taxonomy. Installation of JIRA 4.0 and JIRA 4.1, GreenHopper and more plugins on the interim server and migration to the hoster.

Technologies: Windows Server 2003, Oracle 10g as database, Tomcat 5.5 as application server. Perl- and Jelly-scripts for data migration. Connection to Subversion repository.

### **5/09 - 7/09 Projekt Manager Customer Care Services**

E-Commerce

Project manager in the customer care redesign project's analysis phase. Refactoring into a service oriented architecture with B2B API's and a new frontend for the account managers. Planned as offshore development project.

- Project Management
- Stakeholder coordination
- Data model analysis
- Requirements review
- Knowledge transfer to the offshore developers

Technologies: Oracle 10g as database, JBoss application server with EJB3 and Wicket frontend. Development environment with Eclipse, Linux and Subversion.

### **10/08 - 4/09 Project Manager and Business Analyst JIRA Upgrade**

E-Commerce

Project Manager and Business Analyst for a global operating Internet company. Upgrading a big installation of Atlassian JIRA to the latest version 3.13 and reimplementing all developed functionality as plugins. Project management according to the customers PM processes with the three project phases analyze, development and rollout.

- Project Planung (goals, resources, milestones), project progress controlling and project closure
- Enhancements and requirements analyzis, stakeholder communication
- Direct and manage offshore development team (offshore team introduction, continuous quality improvement)
- Data migration to new JIRA version and plugin usage
- Functional Documentation for the developed plugins
- Performance tests and measurements
- Integration in Windows LDAP with Atlassian CROWD and integrate Subversion repository
- Tools: Eclipse, tomcat, MySQL, maven2, CVS, JMeter, Confluence, MS Project

## **8/08 - 9/08 PMP Study**

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Study for project management certification PMP (Project Management Professional) from Project Management Institute [PMI](http://www.pmi.org). Related to the PMBOK, third edition with the five project management process groups initiating, planning, executing, monitoring & controlling and closing. And with the nine project management knowledge areas:

- Project Integration Management
- Project Scope Management
- Project Time Management
- Project Cost Management
- Project Quality Management
- Project Human Resource Management
- Project Communication Management
- Project Risk Management
- Project Procurement Management

## **4/08 - 6/08 Interims Manager Social Network**

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E-Commerce, Online Advertising

Interims Sales Manager and OpenSocial project leader in a big German social network company.

- Interims Sales Manager, technical contact for the internal sales department and the external online marketing agency
- Coordination online advertising on the web sites
- Writing Project Requirements Documentation (PRD)
- Documentation of the technical interfaces, eg. for targeting
- Interim project leader OpenSocial
- Time and resource scheduling, moderation
- Jira ticket system, Confluence Wiki, Microsoft Office Tools, GanttProject

## **1/08 Rails Development**

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OpenSource

- Updating of a Rails 1.2 webapplication to Rails 2.0
- Implementing of unit and functional tests

## **9/07 - 12/07 Deputy of Project Leader**

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Industry

Supporting project leaders in two nearshoring projects (Switzerland und Slovakia). The projects are developing with Java on the Eclipse Rich Client Platform (RCP).

- Weekly project meetings, tracking project progress (with MS Project and MS Excel, later with Jira)
- Coachings for leadership and team roles
- Feasibility study to choice a tracking tool
- Installation of the tracking tool Atlassian Jira Enterprise 3.11 and the Wiki Atlassian Confluence 2.6.0 (based on Windows Server 2003, MySQL 5.0 Community Server and Tomcat 5) with additional plugins, LDAP-authentication, Subversion integration and configuring individual work flows

### **8/07 - 10/07 Development of 2 Webapplications**

OpenSource

Development of two webapplications with:

- Ruby on Rails 1.2
- Using the libraries AuthenticatedSystem and FPDF
- Creating the webdesign and make it working for IE 6.0/6.5/7.0 and the Gecko rendering engine
- Flash-Video Demo with DebugMode Wink
- Development environment: Linux, MySQL, SVN, Eclipse and trac

### **8/07 Specification, Mobile Telephone Company**

Mobile Phone

Specification of a phone number replication Perl script and the used interfaces for a mobile telephone company.

### **4/07 Analysis of Customer Satisfaction, Mobile Telephone Company**

Mobile Phone

Preparation, execution and analysis of a customer satisfaction questioning (mobile telephone company) for a IT system house.

### **11/05 - 3/07 Interims-Management Subscriber Activation**

Mobile Phone

Coordination and Leadership of the IT operations in the Subscriber Activation of a big German mobile telephone company. The Subscriber Activation System is Windows and MSSQL based.

- Team Leader for the operating team
- Coordination of the operating team, the IT service provider, the software developer and the customer
- Incident management (Netguide)
- Problem management (problem requests - PRs and chargeable requests - CRs with the distributed defect tracking system - DDTS)
- Change management (prepaid service requests - PSRs and additional service requests - ASRs, Lotus Notes based, USD)
- Configuration management
- Applications management (e.g. preparing and installing new releases as the G-Release)
- Infrastructure management
- Service level management (according to the IT Infrastructure Library - ITIL)
- SOX - Sarbanes-Oxley Act of 2002
- Development of a Perl-script for telephone number replication with ODBC to Informix and MS-SQL databases

### **9/05 - 10/05 Concept and Coordination of Load and Performancetest** Financial Services

Concept, Coordination and technical support of the Load and Performancetest S2SKom (XML-interface as J2EE Connector Architecturr from Bea WLS to IBM IMS Connect).

- Writing the concept
- Coordinating the work
- Supporting the test factory technically
- Writing the final report



### **7/05 - 8/05 Maintenance**

Financial Services

Analysing and Fixing problems into the J2EE application Himalaya FDL/Kredit using:

- Test and development environment: Sun Solaris 8, Linux Blades, Windows XP and Citrix MetaFrame
- Application server: Bea WLS 8.1
- Development tools: ClearCase, Eclipse, ant and JUnit
- Documentation: Lotus Notes, MS Office and TWiki

### **3/05 - 4/05 Intranet Migration**

Promotional Articlens, Design Products

Intranet and Email Migration:

- Installation and configuration of TikiWiki 1.8.5 (PHP and mySQL based CMS)
- Providing the old TikiWiki content as read-only HTML
- Backup-script for the CMS installation and the MySQL database
- Converting the old Email content in an IMAP mailbox with isync

### **8/04 - 12/04 Schufa interface reimplementation**

Financial Services

Java development: reimplementing of the Schufa SCDI interface from C++ (Bea WLE server) to Java (Bea WLS server).

### **6/04 - 2/05 Connecting AZD**

Financial Services

Changing the Himalaya/Kredit interface to the NordIT credit application from host application AZD to native transactions over S2SKom XML interface.

- Development coordination
- Connecting the new credit form credit on demand
- Java development, modul test on JUnit base, technical tests

### **7/03 - 5/04 Project Management Himalaya/Kredit**

Financial Services, Bank, Insurer

Project management of the Berlin development team. Extending a big financial J2EE application with the access to one more bank and one more insurer. Implementation of alteration of contracts and extending with the credit form credit on demand.

- Project planning with MSProject
- Requirements analyse, requirement specification and business concept
- Project coordination and management
- Internal document management with TWiki
- Technical documentation
- Modul test on JUnit base and technical tests, documented on Mercury TestDirector
- Supporting the development environment (Sun Solaris, Linux, Bea WLE und WLS 8, IMSConnect, ant, JUnit, eclipse, TWiki)
- problem tracking

### **1/03 - 6/03 Solaris Administration**

Financial Services

Solaris Administration into the bank's software development department. Also supporting Oracle products and BEA products WLE and WLS.

- App. 40 Sun Server and FSC Server Solaris 2.5.1 ... 9, eg. Sun Ultra 450, FSC PRIMEPOWER 440 and 1000 with SAN
- Support and Installation of Oracle 8.1.7 and the BEA-products WLE 4.2 und WLS 5.1, IMSConnect.
- DB2 Installation on Solaris
- Technical documentation with TWiki
- Project ZSSB: on SunFire 480, Sun T3 und StorEDGE 5200 with Veritas Volume Manager 3.2.
- Project WebFiliale: Installation Vignette 5.6.2 and Netlife Banking Server
- Project Marvin: Installation DirectConnect and MQSeries 5.2

### **3/02 - 12/03 Coaching-Education**

CoachingEducation on the [CoachingAcademie Bielefeld](#).

- Communication training
- Intention, mission & vision
- Team-coaching
- NLP
- Relations-dissolving
- Systemic organisation consulting
- RET-coaching

### **7/01 - 12/02 Himalaya II**

Financial Services, Bank

Consulting and Support for the credit team into the Himalaya II project.

- Quality Management
- Organisation
- Build mit ClearCase, ant and make, Mercury TestDirector
- BEA WLS 6.1, Solaris 8
- Java- and C++ - programing
- Access to the German Schufa with SCDI interface
- Generic testsuite with JUnit, ant and the Java reflection API
- Unit-tests and business test settings
- Documentation and reviews

### **7/01 - Performance Tests WebFiliale**

Financial Services, Bank

Performance tests on a Sun Enterprise 10000 with:

- Sun Solaris 2.6
- BEA WLE 4.2
- BEA WLS 5.1
- Oracle 8.0.6 and 8.1.7
- NetLife Banking Server
- Vignette Content Management System

Using the Java test framework [JUnit](#) and [HTTPUnit](#) with concentraion on optimizing the BEA WebLogic server.

## **5/01 - BEA WLS 6.0 Developer Training**

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One week J2EE development [training](#) of EJBs with BEA WLS 6.0.

## **12/00 - Das Training - Part 2, People and Relationships**

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Relationship-Training on the [CoachingAcademie Bielefeld](#).

## **10/00 - 6/01 Himalaya**

Financial Services, Bank

Member of the Himalaya/Kredit team, realising the GAPI's (host interfaces) for NordIT, SISWest, Gothaer insurance and Schufa:

- Development environment with Solaris, ClearCase and SNIFF
- C++, Java, Tuxedo, SNA programming (LU6.2/APPC, CPI-C), Perl
- Configuration of the SNA-stack DCL SNAP-IX 6.0.6
- BEA WLE 4.2 configuration (SNA with BEA eLink 3.2, domain gateways, WLE domains with security)
- Concept and coordination, implementation, network configuration, test and documentation
- SCDI-Interface to the German organisation Schufa

## **6/00 - Das Training, CoachingAcademie Bielefeld**

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Whitsuntide 2000, "The Training" on the [CoachingAcademie Bielefeld](#).

## **1/00 - 9/00 DBA & Unix SE**

Financial Services

Database administrator and Unix system engineer, Oracle databases and other Oracle products, as well as BEA applications:

- Solaris 7 and 8 jumpstart installations
- Sybase Adaptive Server Enterprise 11.5.1 and 12.0
- Oracle8 Enterprise Edition 8.0.5/6
- Oracle8i Enterprise Edition 8.1.5/6
- Oracle Enterprise Manager 1.6.0 on Windows NT
- Oracle WebDB 2.2.0
- Oracle Application Server OAS 4.0.8.1
- BEA WebLogic Enterprise WLE 4.2 (includes Tuxedo 6.5)
- BEA eLink for Mainframe SNA 3.1
- BEA WebLogic Server WLS 5.1
- SNA Stack DCL SNAP-IX 6.0.6
- NIS+ and DNS domain change, DNS files created with own scripts and DNM from NIS+ und Windows NT host list
- Access to the Sybase inventory database with Java
- Project-related login environments
- Security checks (password aging, suid files, portscan)

## **5/99 - 12/99 Sybase & Unix Administration**

Financial Services

Sybase and Unix Administration in a bank development department with Solaris 2.5.1, 2.6; Linux 2.0.36 and Sybase 11:

- Sybase SQL Server 11.0.0.3
- Embarcadero DBArtisan 4.01 and LogicWorks ERWIN/ERX 3.5 on Windows NT
- Setting up a firewall with RedHat Linux 5.2
- SMB-shares with Samba from Solaris
- Secure network connections with SSH
- Time synchronisation with NTP
- Password aging on Solaris
- SNMP-Monitoring with UCD-SNMP and MRTG
- Developing an inventory database, based on Sybase and Perl CGI-scripts
- Sun Online DiskSuite (mirroring, logging and stripes)
- Year 2000 change preparation

## **10/98 - 4/99 Solaris Administration**

Financial Services

Solaris Administration as Unix System Engineer in a big installation with SPARCstation 20, Ultra 1/5/10/450, E1000 and E4000.

- NIS+, DNS, NFS, Automounter, CDE, SDS
- Solaris 2.5.1 Installation Server
- Aria NetBackup 3.1 with DLT Autoloader
- AutoSys 3.4.2
- Messaging Software IBM MQSeries 2.2
- Bourne-Shell and Perl 5 Scripts
- Euro currency support

## **10/98 PCShare Installation**

Printing House

Resolving some network problems in a printing office with SUN Solaris, PCs and Macintosh's. Installing new network card and PCShare for two PCs.

## **5 - 9/98 Unix Support as Senior Administrator**

Aerospace Industry

2nd level user support in a big Unix network with Sun and SGI hardware and some branch offices.

- Solstice DiskSuite SDS 4.1
- NIS, DNS, automounter
- OpenVision NetBackup 3.0
- ControlData ARIA\*ObjectArchive 1.4
- User management, CDE configuration
- Solaris 2.6 install server, Solaris client and server installations
- NT clients with Samba 1.9
- csh, Bourne-Shell and Perl 5 scripts

## **4/98 Implementing a MS Access 8 Database Application**

Retail Trade

Creating a database application with MS Access 8 for the inventory in a retail trade. Design the database model, implementing the sale, the purchase, the stock and the print lists processes with SQL and MS Access basic.

## **1 - 2/98 MCSE Windows NT**

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Studying and Training to the Microsoft Certified Professional + Internet and MCSE (Microsoft Certified Systems Engineer), see [MCSE](#). Passed the following exams for the certifications:

- 70-058 Network Essentials
- 70-059 Internetworking with Microsoft TCP/IP on Microsoft Windows NT 4.0
- 70-073 Implementing and Supporting NT 4.0 Workstation
- 70-067 Implementing and Supporting NT Server 4.0
- 70-068 Implementing and Supporting NT Server 4.0 in Enterprise
- 70-077 Implementing and Supporting Microsoft IIS 3.0 and Index Server 1.1

## **11 - 12/97 Study "Migration of Windows 3.1 to Windows NT"** Government Agency

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Some studies to the migration of a software development department with nearly 500 PCs from Windows 3.1 to Windows NT Workstation 4.0 with checking the existing network situation (boot PROM, NFS network drives, authentication and printing over PCNFSD). Windows NT 4.0 workstation installations, installations with Open Management Architecture (OMA) from AROSOFT and using the NFS network drive.

## **9 - 10/97 NFS Client for Windows NT Study** Government Agency

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Writing a study to select a NFS client for the Windows NT 4.0 workstation. Comparing the functions and performance of different NFS clients and verifying the stability and the behavior in the existing network environment. Using Perl scripts on Windows NT.

## **7 - 8/97 Porting and Installation of GMH on HP-UX 10** Telecommunication

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Porting a TMN project on HP-UX 10. Reimplementing the installation with Perl scripts for HP-UX 10 and Software Distributor.

## **1 - 6/97 Base Installation of SMC 2.0 on HP-UX 10** Telecommunication

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Changing the SMC base installation to HP-UX 10 and from update to Software Distributor (SD) format. All configure scripts are now realized as Perl scripts and Perl modules.

Installation and Configuration of:

- Action Request System 3.0
- ORACLE 7.3

Reimplementation of the SMC data installation procedure with Perl objects.

## **8 - 12/96 Installation/Infrastruktur SMC** Telecommunication

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Extending the SMC base installation with HTTP server Apache 1.1.

Installation and configuration of C6000, including:

- HP/PE ME10 7.10 (HP Precision Engineering/Mechanical Engineering Series 10 Rev. 7.10)
- HP WorkManager 2.70
- C6000 3.43

Configuring the multi-protocol router BIANCA/BRICK (BinTec) for TCP/IP over ISDN.

Result was an English InterLeaf document (110 pages).

#### **4 - 7/96 SMC 2.0 Base Installation**

Telecommunication

Changing the revision control system to ClearCase. From this point on, all developments are based on ClearCase.

Creating a production environment to fill the netdist area or to write a tape. Realized with some Perl scripts.

Implementing a check procedure for the customer data as Perl script.

Extending the SMC base installation with the following products:

- HP-UX 9.07 for HP 9000 Series 700
- iFOR/LS 3.0.2 as license software
- NCDware 4 for NCD19c and NCD HMX X-Window terminals
- Action Request System 2.0 as trouble ticket system
- Netscape Navigator 3.0
- XNTP 3.5 for time synchronization
- HP OpenView 4.1

#### **12/95 - 3/96 Base Installation SMC 1.1 on HP-UX 9**

Telecommunication

Creating a base installation for a distributed TMN system. Automatic product installation and configuration (with customize scripts) of:

- HP-UX 9.04 for HP 9000 Series 800 and  
HP-UX 9.05 for HP 9000 Series 700 by choice over tape or netdist server
- NCDware 3.1
- Action Request System 2.0
- HP JetAdmin Utility D.00.37
- Netscape Navigator 1.1N
- ORACLE 7.1, SQL\*PLUS 3.1
- DataViews 9.1
- Streams/UX 9.05
- LLC2 Library X.25 8.05
- OTS/9000 4.03

Some partitioning variants, including the configuration of the logical volume manager (LVM) and optional installation of disk arrays HP A3231A and A32332A.

Configuring HP-UX, including Network File System (NFS), Network Information Service (NIS), Berkeley Internet Name Domain (DNS) and X-Window Display Manager (XDM).

Printer configurations (serial, parallel or Ethernet connected).

Backup, restore and creating of a recovery tape.

Result was a customer depending, automatically running SMC (Switch Management Center) base installation using the HP-UX update format. The configuration was done by customize scripts (shell scripts). An English Interleaf document with 70 pages was created.

#### **11/95 Porting UniScreen to HP-UX 10**

Airline

Porting UniScreen and fixing some very small problems.

## **5 - 7/95 OMC-R 3.1 auf Solaris 2.4**

Telecommunication

Creation of the base installation for the Operation and Maintenance Center - Radio (OMC-R) in release 3.1 for Solaris 2.4.

Result was an Interleaf document (approx. 200 pages). Contents were the installation and configuration of:

- SPARCserver 670MP, SPARCstation 5 and SPARCclassic
- Solaris 2.4 (installation, configuration and patches)
- JumpStart (creating a JumpStart floppy disk with the possibility of a network installation)
- NIS+ (master server, replica server and client)
- DFS (NFS)
- SunLink HSI/S 2.0 (for the high speed serial interface SBus card)
- SunNet X.25 8.0.2
- SunLink OSI 8.1
- JetDirect C.02.33 (for HP LaserJet printers over Ethernet)
- NCDware 3.2.1 (installation, configuration, booting and printing over the X-Terminals)
- SUNWmotif
- XDM (X-Window Display Manager) configuration
- Online:DiskSuite 3.0 (mirroring of all file systems)
- ufsbackup and ufsrestore

## **3 - 4/95 OMC-R 3.0 on SunOS 4.1**

Telecommunication

Creation of the base installation for the Operation and Maintenance Center - Radio (OMC-R) in release 3.0 for SunOS 4.1.

Result was an Interleaf document (approx. 200 pages). Contents were the installation and configuration of:

- SPARCserver 670MP, SPARCstation 5 and SPARCclassic
- Hardware configuration (SCSI, Ethernet, inkjet and laser printer, RS-232 and RS-449)
- SunOS 4.1.4 (partitioning, kernel configurations and patches)
- NIS (master server, slave server and client)
- NFS
- SunNet HSI/S 1.0 (for high speed interface SBus card)
- SPC/S 1.2 (for serial parallel controller SBus card)
- SunLink X.25 MCP 6.0 (for MCP-VMEmbus board)
- SunNet X.25 7.0 (installation and configuration for TCP/IP over X.25)
- SunNet OSI 7.0.1
- ORACLE
- Sun Online:DiskSuite 3.0 (mirroring of all file systems)
- iXMOTIS (X11R5 and Motif 1.2)
- NCDware 3.1 (installation, configuration, booting and printing over X-Terminals)
- JetDirect C.02.17 (laser printer HP LaserJet 4M+ over Ethernet)
- Printing over the serial interface
- Backup and restore

## **3/95 Hard- and Software-Installation of a PC with SCO 3.0**

Telecommunication

- Hardware configuration 486, CD ROM, Ethernet card SMC/WD 8013EPC and MODULAR-4/Z280 card (real time card with relay module)
- Installation and configuration of SCO Open Desktop/SCO Open Server 3.0

## **2/95 Training "DTP and QuarkXPress"**

Printing House

Execution of a training "DTP and QuarkXPress" on Apple Macintosh in a publishing house.

## **1 - 2 /95 Account Software for a Portable Radio Network**

Telecommunication

Implementation of an account software for the customer administration of a portable radio network. Creating a configurable print filter and advance a library for data storage with binary trees in C.

## **12/94 Demonstration of UniWare<sup>#</sup> Products**

Demonstration of UniWare<sup>#</sup> Products CSI<sup>#</sup> (Client Server Interface), UniScreen<sup>#</sup> (graphical user interface) and UniDesk<sup>#</sup>.

Installing an Ethernet segment and connect the X-Terminals.

## **12/94 Backup with HIBACK/UNIX**

Bank

Network based automatic data backup with DAT autoloader. Installation of HICOMP software Technologies Inc. HIBACK/UNIX and fitting it into the product RESI/6000. In addition the flow of the daily, weekly and monthly data protection with tape labeling and handling was implemented as shell scripts.

## **11/94 DTP Consultation**

Advertising Agency

DTP consultation for the Apple Macintosh and support an advertising agency (e.g. data transfer to Italy).

## **9 - 10/94 Maintenance RESI/6000**

Bank

Maintenance and development for the product RESI/6000.

## **7/94 Dokumentation of RESI/6000 with Word 5**

Bank

Creation of German manual (80 pages) for RESI/6000 with Word 5.

## **3/94 - 6/94 RESI/6000 on AIX 3.2**

Bank

Maintenance and advancement of a product for revision security and the access protection for computer systems IBM RS/6000 within the bank area. The collected data of all clients are stored in an Informix data base on one server.

- Menu controlled user shell with group oriented rights (no access to the UNIX Shell)
- Recording of the system processes by Auditing and Accounting
- File data in a Informix database
- Tools for the monitoring of the system state
- Implementation in C, ESQL (in C embedded SQL code) and shell Scripts for AIX 3.2