



## CV

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#### About me

##### *Software Developer, Coach*

Dedicated software developer with countless years of experience in systems programming, application development, development processes, requirements analysis

Worked on everything from mainframes to desktops and process control

Since 25+ years concentrating on UNIX, C++, C, a bit of Java and C#

Thorough understanding of the UNIX philosophy and tool box from mere scripting to compiler construction, low level programming, and more

##### *Focus*

Strong advocate of clean code, version control, test-driven development, and agile practices

Problem solving and algorithm development

##### *Strengths*

Problem solver - strong in analysing problems, designing algorithms and developing feasible solutions

Experience in dealing with complex problems, which cannot be solved on the beaten track

Extensive knowledge, even outside IT

##### *Working style*

Goal oriented team player, but still able to work on my own

I like to share my knowledge, preferably in an agile and cooperative environment - great believer in "egoless programming" (Gerald Weinberg)

Experience with international teams; I would like to work again in an international project

##### *Special Interests*

Typography, Photography, Music - from middle ages to present

##### *and ...*

... would like to delve more into Smalltalk and Lisp, functional programming, embedded software ...

#### Education and Knowledge

##### *Study*

Mathematics and Informatics / Computer Science at Karlsruhe University (KIT) - Diploma in Informatics

##### *Certificates*

IBM Certified Application Developer - DB2 Universal Database V8.1 Family

Professional Scrum Master I

##### *Languages*

German: first language

English: written and spoken - project experience, mostly in a banking environment

Plus: some French, Italian, Latin

#### Expertise (recent projects)

##### *Applications*

Computational Geometry, STL, grid shell structures

Investment Banking, Repo Trading, SunGard Apex (Martini), Eurex SecLend, CCP

PeopleSoft HR; Logistics, ERP, interfacing external systems to SAP WM

##### *Main Focus on UNIX*

System-level Programming; Shell scripting, UNIX tools, GNU tools - including lex/yacc, nroff/troff etc.

All kinds of UNIX systems including BSD, System V, Solaris, Linux, AIX HACMP, HP-UX

Apache Webserver, Tomcat, X Window System

##### *Windows Experience*

PowerShell, Visual Studio C++/C#, SQL Server, Team Foundation Server

##### *Methods, Languages, and Tools*

Scrum, agile software development, test-driven development, pair programming

CMMI

C and C++, static code checking, code coverage, unit test frameworks, UNIX and Windows IDEs, Doxygen

Java, JUnit, Vaadin, IntelliJ, NetBeans, Eclipse, ant, maven, Servlets, JSP, Derby, JDBC

Mercurial, CVS, Subversion, TortoiseHG/~CVS/~SVN, WinCVS, Team Foundation Server, TeamCity



HTML, CSS, JavaScript, PHP, Windows Scripting Host  
XML, XSD  
Tcl/Expect, VBA (Excel)  
PeopleCode, Application Classes, Component Interface, Application Engine, Workflow  
UML, EnterpriseArchitect, Visio  
MySQL, Oracle, Replication, AQ, Oracle Objects, PL/SQL, user defined aggregate functions, Pro\*C, OCI  
SSL, OpenSSH, PuTTY, ssh.com, Vshell, GnuPG, PGP  
Active Directory, LDAP, JNDI, Apache Directory Studio  
Apache POI, iText Library

## Projects

02.2019-05.2019 Computational Geometry (Medical)

Designing and developing a software module to create grid shell structures from surface definitions (C#).

02.2015-01.2019 Consulting and Software Development (Investment Banking)

### Assignment

Senior Developer (Java, Vaadin, C#, ASP.Net, Transact-SQL)

### Contribution

Over the years, the project has accumulated a substantial amount of technical debt and a mixture of different programming languages and tools. I suggest and implement code and architecture refactorings to regain maintainability and reliability. I am building new applications as a showcase of good programming practices and proper tools usage, to leverage the full potential of the tools at hand. Refactoring of SQL views and procedures to improve performance.

In a renewed team, we are implementing a service oriented architecture in Java, as a basis for future development.

Design and implementation of project-specific automated deployments.

05.2014-12.2014 Consulting and Software Development (Investment Banking)

### Assignment

Analyst/Developer (C++, Java) in the SunGard Apex project to support the introduction of Repo trading and SunGard Apex SettlementLink (SWIFT)

### Contribution

Requirements analysis, software design and implementation of interfaces to internal and external systems

01.2011-12.2013 UNIX Consulting and Software Development (Investment Banking)

### Assignment

C++ software developer in the SunGard Martini/Apex project

### Contribution

Application design and architecture, e.g. analysing and processing "locate request" mails

Automating the build and deployment processes, introducing nightly builds, unit tests and TDD, static code analysis, code coverage analysis; code refactoring to improve maintainability; svn best practices

Coaching and consulting development processes and UNIX

03.2003-03.2012 Online-Registration for a Local Track Event (Sports Club)

### Contribution

Design, implement and maintain the online registration for a track event

Download of registration data as Excel file, download of participation certificates as PDF documents

Initial solution with PHP, in 2007 re-implemented using Java / Tomcat; regular updates

07.2010-12.2010 Unix-Consulting und Software Development (Logistics)

### Assignment

Coaching and Consulting UNIX and Solaris SMF

### Contribution

SMF-Framework to start / stop multi-level distributed applications

11.2009-06.2010 Consulting and Development in the „Connectivity“ Group (Bank)

### Assignment

Architecture an automated inventory of server installed connectivity software

Implement a spider to explore the environment, find affected servers and collect configuration data

### Contribution

Define and create a development environment

04.2009-06.2009 Communication Interface for a Transport Vehicle (Research Centre)

### Assignment

Design application classes to implement the communication protocol between autonomous transport vehicles (lift trucks) and a central control unit; implement the C++ library



01.2007-02.2009	Identity Management and Unix-Consulting (Logistics)
<i>Assignment</i> Accounts of more than 600 legacy applications have to be mapped to about 80'000 IT customers during the initial build-up of a new identity management solution.	
<i>Contribution</i> Design and implementation of the subsystem, using a fault tolerant map-reduce algorithm Implement a simulation model in Excel to study the effects of process parameters and weighting factors Application consulting, supporting the application approval process	
<i>Benefit</i> The outstanding accuracy requires only minimal manual work in the whole process	
10.2003-12.2006	Consulting and Software Development (Logistics)
<i>Assignment</i> Tools and infrastructure to monitor a set of multi-server, multi-level applications A logging framework for shell scripts, integrated into a Log4J environment Tools to support deployment of development artefacts to QA, testing, and production Automation of software installation Optimize SQL procedures and application runtimes Coaching and consulting on UNIX, configuration- and version management, SSH, CVS Interface PeopleSoft to a Java Connector to Lotus Domino Code restructuring to improve maintainability	
01.2001-11.2001	Company Rating / Basel II (Consultancy)
<i>Assignment</i> Develop an application to determine the business indicators of a company rating Support multiple subsidiaries / company locations, and product groups Determine historic and current business indicators Best- and worst-case predictions based on economic indicators Determine costing data, income and loss statement, balance sheet and credit rating	
<i>Contribution</i> Requirements analysis Data model and database design Implementing the application, and application specific and technical class libraries	
04.2000-09.2003	Unix-Consulting and Software Development (Bank)
<i>Assignment</i> Tool development in a PeopleSoft development team <i>Framework for the secured Transfer of Payroll Data, Architecture and Implementation</i> <ul style="list-style-type: none"><li>Integrates into HACMP, maintains a queue of pending transfers, automatic restarts</li><li>approved by IT security department for data transmission from and to external partners</li></ul> <i>Functional Enhancements to the PeopleSoft 7 &amp; 8 Process-Scheduler</i> <ul style="list-style-type: none"><li>Implemented functionality to upload and download files, interface to mainframes</li><li>similar functionality only found in later official releases</li></ul> <i>Consulting and Coaching on Architecture, UNIX, Encryption, Software Development, Deployment, etc.</i>	
<i>Contribution</i> Suggest using DCE/DFS for shared access to common data Assessing "Secure Mail" services to send pay-slips Testing compatibility and performance of several encryption products Developing various tools, e.g. <ul style="list-style-type: none"><li>run external application from PL/SQL scripts</li><li>analyse regression test results, to track database changes</li><li>compile record descriptions and action items into executable scripts for data reconciliation</li></ul>	
04.2000-08.2000	Consulting and Software Development (Internet Start-Up)
<i>Contribution</i> Setup a Solaris development environment; introduce version control (CVS) Design and prototype an Oracle based high performance scheduler for distributed processes	
2000 and earlier	Consulting and Software Development (Bank)
<i>Assignment</i> <i>Martini / Repo Interface to Backend Systems - Consulting a Developer Team</i> Re-engineering the application architecture to match operations requirements for a fail-safe runtime environment; HACMP configuration and tests; software requirements analysis "Y2K" Setup and coach configuration management; consulting on UNIX themes	



Protect the FTP- and Webserver against unauthorised access

*Unix Engineering Group – Coaching Project Teams on the Move to Production*

Consulting on application architecture, deployment and configuration procedures, IT security, data backup, HACMP

*Fixed Income Products – Consulting and Application Development*

Consulting on project management, application architecture, product development

In charge of moving the applications of the team to a new data centre

*Fixed Income Products – Design and Development of an Interface to the Bloomberg Trade Feed*

Design and implementation of a client-server application to receive the data feed and forward data streams to other applications; leading the development team

#### *Other Contributions*

Support the move to production of a development system / prototype

Redesign the runtime environment to better integrate Murex on AIX with the operating system

Database replication; event driven print of trade tickets using PostScript templates

#### Mobile Data Acquisition as a Front End to SAP/WM (Chemical)

##### *Assignment*

Mobile Data Acquisition for a decentralized warehouse management system (foils)

Enhancements for the handling of pallets, transport shuttles, and to support a raw materials warehouse

##### *Contribution*

Design the system architecture, supporting dynamic configuration of program variants

Leading the development team

Simulator for the SAP interface, to test the mobile data acquisition in a development environment

#### Consulting, Applications and System Level Software Development

*Sales Application with an Interface to Capacity Planning (CICS)*

Application design and architecture; Team lead; contact to third party software providers

*Development of an Integrated Office Suite for UNIX*

Integration of third party products to form an office suite including project planning and cost settlement

Design the application architecture

*Compiler Construction – “PDL” Packaging Design Language*

Design of the PDL language and the system architecture of compiler, interpreter, and device drivers, to specify the layout of offset films

##### *Consulting*

Software development, data centre organisation (IBM, CICS)

Design and architecture of the process control for a rubber mixing plant as part of a tyre plant

##### *Various UNIX Projects*

System level development, e.g. redesign the communication protocol of a warehouse control software to achieve robustness and stability

Telefax software for UNIX systems

Software porting

#### Terminal Server Daemon *tttyd* (Product Development)

##### *Product*

*Ttyd* - the terminal server daemon - establishes outgoing connections from a UNIX host to the serial or parallel interfaces of terminal (network access) servers

Applications access devices by means of a pseudo terminal

##### *Product Characteristics*

Minimal resource usage; proven to handle time critical protocols; runs in a HACMP configuration

##### *Areas of Application*

Connecting printers and other devices to UNIX systems, e.g.:

- connecting the base station of RF terminals to a controlling host
- connecting warehouse control systems to a central server

##### *Contribution*

Design and Development, software porting, consulting on integration into applications, sales

#### References – confirmed by GULP ([www.gulp.de](http://www.gulp.de))

##### 01.2011-12.2013 UNIX Consulting and Software Development (Investment Banking)

September, 19th 2013, by the project lead “Repo/Lending STP” – investment bank, 4.000 employees (excerpt, translation provided by me)

*“[...] with his comprehensive expert knowledge and his tremendous experience, the consultant substantially contributed to the success of the project. He initiated improvements to our development process, which had markedly favourable effects on the code quality and reliability of*



*our applications. In particular, I want to emphasise nightly builds, automatic creation of installation packages, configurable makefiles, and static and dynamic code checking. Moreover, the consultant has been of prime importance when unit tests and test driven development have been introduced. Based on his longstanding experience in version control, he played a leading role in the definition of our "SVN best practices", which he further refined in the following. [...] With his reasonable attitude, and being committed to the success of our project, with his uncompromising advocacy of quality, and his extensive knowledge the consultant is valued by co-workers and the project management team. [...]"*

04.2000-09.2003      Unix-Consulting and Software Development (Bank)

May, 19th, 2003, by the project lead of a major German bank (excerpt, translation provided by me)  
*"[...] during these 3 years, the consultant worked independently on a number of subprojects - from requirements analysis and design to implementation and deployment into production. He familiarised himself quickly and copiously with new working areas. [...] The documentation of his projects is exemplary, even compared to the standards of our world-wide software development organisation. [...] He always advocated 'clean' solutions, meeting all claims regarding reliability and maintainability. [...] With his above-average knowledge, he contributed substantially to the success of our project. Being able to work independent, having conceptual skills, and being able to offer expert advice has been the fundament of his successful commitment. [...]"*

More about me ...

... in business networks

<http://www.linkedin.com/in/klausdieterost>

With a nice reference stating:

*"[...] the important message is that his work was always well prepared, he was able to offer several different solutions and even the non-standard ones made good sense and were supported by strong arguments. I learned from him that one should always try to take a higher point of view to be able to understand a task in its full wideness.*

*I wish all my colleagues were so experienced, had such a wide UNIX knowledge, and would fight for their business like Klaus did."*