

**Jochen Hayek**  
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Germany

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## Professional Objective

Developing reports using JasperReports.

Supporting continuous integration (Jenkins), build and release management incl. the deployment process.

Script development on UNIX (incl. Linux, AIX, Apple Mac OS X and Solaris), Cygwin and BusyBox in Shell (bash, ksh, ash), Perl, Python, and Ruby.

Querying details from XML data using XPath and XQuery.

Developing XML specifications using RELAX NG.

Operational system support (OSS) and trouble shooting.

## Skills

*Languages:* German (as a native speaker), English, French.

*Shells:* bash, Korn shell (ksh), Almquist Shell (ash), Bourne shell (sh), zsh, C-shell (csh).

*Interpreted Programming Languages:* Perl, Python, Ruby, Tcl/Tk+expect, awk, snobol/spitbol, various LISP-s including xlist.

*Continuous Integration:* Jenkins, CruiseControl.

*File Transfer Software:* rsync, wget, curl, ....

*Various other UNIX utilities (Shell Scripting Utilities):* sed, seq, ....

*Processing Virtualisation (VMs):* Oracle VirtualBox, VMware.

*Unix-like Operating Systems:* Mac OS X, Linux(SuSE, Redhat, CentOS, Debian ), SysV R4, Solaris, BSD, SunOS, Cygwin.

*Other Operating Systems:* Microsoft Windows..., VMS, BS2000.

*Relational Databases:* MySQL, Oracle, PostgreSQL, Sybase, Informix, GeminiRDBMS.

*Reporting Software / Business Intelligence:* JasperReports, iReport, JasperReports Server.

*Software Testing:* "Selenium" (acquired at DigitalPerformance.de (2010-10), supplemented by own read-up), "Expect" (the Tcl extension).

*Compiled Programming Languages:* C, Ada, Modula-2, Pascal.

*Assembly Languages:* Intel 8080, Motorola 68k, IBM 370.

*Compiler Construction Kits:* LEX, YACC, regular expressions, DIANA, IDL, Attribute Grammar Systems.

*Batch Control Software:* Jenkins, AutoSys, crontab.

*Configuration Management incl. Source Code Control Software:* Subversion, CVS et. al., RCS.

*Build Management / Make Tools:* make, rake(make à la Ruby), Ant.

*Text Publishing Using Markup Languages (Typesetting):* DocBook, texinfo, troff (mm, man, me, ms).

*Text Publishing Using WYSIWIG (Word Processors):* Open Office, Microsoft Word, FrameMaker, Interleaf.

*Spreadsheet Software:* Microsoft Excel, Lotus-123.

*Markup\_Languages / {XML,SGML}:* Ant, xmlresume, DocBook, ....

*CASE -- computer-aided software engineering:* methodologies, graphical design and specification tools, documentation tools, code generation tools.

*CASE: methods for specification, design:* automaton and finite state machine, class and inheritance, composition, entity-relationship model.

*CASE: design and specification tools:* Teamwork (SA/RT), SADT.

## Employment History

*January 1999–Present*

*Aleph Soft GmbH* (Berlin, Germany)

**managing partner**

operating systems: UNIX (Linux (SuSE)), Mac OS X, Microsoft Windows; various ongoing inhouse projects

*Achievements:*

- utility: *creating electronic invoices in XML à la ZUGFeRD* (together with PDF invoices) from the CRM database (using XPath and XQuery)
- utility *extracting table formed data from HTML files* (web/HTML scraping (ETL)) (e.g. the German tax office's tax accounts reports): details get extracted using XPath expressions (XMLStarlet).

- utility: *extracting table formed data from PDF files* (PDF scraping (ETL))
- telephone call logging: *AVM FRITZ!Box port 1012 and Google Contacts XML*: telephony events and address book look-up in Ruby on SuSE Linux

*August 2017–Present*

*European Energy Exchange* (Leipzig, Germany)

**Senior Software Engineer**

Oracle DB, Perl, Bash, Debian Linux.

*Projects:*

- (project)

*Achievements:*

- (achievement 1)
- (achievement 2)

*June 2017–July 2017*

*Searchmetrics* (Berlin, Germany)

**Senior Software Engineer**

replacing their crawler software **n3-audit-crawler**

*Projects:*

- reverse engineering their legacy software implemented in Perl

*Achievements:*

- summaries
- documentation

*January 2017–March 2017*

*Commerz Finanz* (Munich, Germany)

**Senior Software Engineer**

Sofico Miles, JasperReports, Oracle

*Projects:*

- Sofico Miles comes with a rather complex data model called **Galaxy** and a legion of sample reports (JasperReports ".jasper" files) to be used as a starting point for customisations. Dedicated JasperReports reports with their SQL queries needed to get derived and completed.

*Achievements:*

- Reverse-engineering the SQL queries from the sample reports supplied with Sofico Miles in order to provide expansible SQL queries for the local use. Developing **PL/SQL** scripts around the SQL queries using Oracle's **SQL Developer**.
- Designing documents layouts following the business department's sketches and texts using JasperReports' iReport, analysing the parts that groups of documents have in common; creating JasperReports **JRXML** using Perl for use within iReport.

- Analysing the business department's data as roughly described in their texts, and correlating these data and database SQL view fields with the help of domain experts (i.e. Sofico Miles).
- Extending the SQL queries (and the PL/SQL scripts) reverse-engineered from the Sofico Miles sample reports by the fields as needed by the business department.
- Completing the JasperReports documents.
- The Perl and shell script code (**ash**) got developed on Windows within a **BusyBoxW32** environment as a minimalistic Unix-like environment, also using Strawberry Perl.

*August 2016–December 2016*

*TDK EPCOS* (Munich, Germany)

**Senior Software Engineer**

Web development in Perl + JavaScript + Bootstrap + HTML + CSS + PostgreSQL under openSUSE Linux.

*Projects:*

- Adding various functionality to the website.

*September 2015–July 2016*

*Dräger Safety* (Lübeck, Germany)

**Senior Software Engineer / Jenkins etc supporter**

work environment: Windows 7, Cygwin

using Jenkins (Continuous Integration) as job control environment, amongst others also for Build Management

scripting in Python, Perl, Bash, ".bat"

XML technology: XPath through Python, XPath through XMLStarlet, XQuery

using Atlassian's JIRA and Atlassian's Confluence

*Projects:*

- Jenkins slaves within VMware machines
- "TESSY" (the unit testing framework) "in the batch" resp. within a Jenkins job
- "Coverity" static analysis framework within Jenkins jobs
- developing reusable tools to be used in the Jenkins environments

*Achievements:*

- utility *compact listing of JIRA issues* (ETL): a bash script retrieves (using curl resp. wget) "issues" from the JIRA server as XML, details get extracted using XPath expressions (XMLStarlet), the result gets displayed as brief textual descriptions.
- utility *listing a Jenkins server's jobs and folders recursively*: a bash script retrieves (using curl resp. wget) a Jenkins server's "jobs" and "folders" recursively as XML, details get extracted using XPath expressions (XMLStarlet, XQuery), the result gets displayed conveniently as URLs.

- utility *exporting all build steps of a Jenkins job* (ETL): a bash script retrieves (using curl resp. wget) a single "job" from a Jenkins server as XML, details get extracted using XPath expressions (XMLStarlet, XQuery), the individual build steps get stored in separate files for further editing resp. historical versioning.
- utility (time-series graphical plot of the memory map of the IAR compilation system) (ETL): a python scripts reads the ".map" file and creates XML from it that will be read the Jenkins server's plot plugin to draw curves from the time-series.

*October 2012–June 2015*

*(A Major Player in the Logistics and Supply Chain)* (Hamburg, Germany)

**Senior Software Engineer / global technical EDI chief supporter**

the main task: trouble shooting lots of irregular occasions and involved Korn shell and Perl scripts

perl, Shell (Korn Shell), Makefile, EDISTAR, Request Tracker AKA "RT", CVS, AIX

perl: TAP (the Test Anything Protocol), Test::More

Unicode, UTF-8, UTF-16

NAS administration

*Achievements:*

- utility *compact listing of RT issues* (ETL): a shell script retrieves (using curl resp. wget) "issues" from the RT server as HTML, details get extracted using a Perl helper script, the result gets displayed as brief textual descriptions.

*April 2012–July 2012*

*(a medium-sized business in the e-commerce sector)* (Berlin, Germany)

**Senior Software Engineer**

Jaspersoft's report generation software suite (iReport, JasperReports (BI)); PostgreSQL, SQL.

developing software using Perl on Linux.

using Subversion for version and release managment.

*February 2012–March 2012*

*Aleph Soft GmbH* (Berlin, Germany)

**Senior Software Engineer**

web/HTML scraping (ETL)

*Projects:*

- *account statement Postbank.de* (web/HTML scraping (ETL)): web-server communication through libcurl in Perl on SuSE Linux

- *account statement Berliner-Sparkasse.de* (web/HTML scraping (ETL)): web-server communication through libcurl in Perl on SuSE Linux

*November 2011–December 2011*

*Deutsche Bank Suisse* (Geneva, Switzerland)

**Senior Software Engineer**

scripting file transfers

*Projects:*

- scripting several SFTP file transfers using the Korn shell on AIX, respecting rather dedicated reliability.

*October 2011–October 2011*

*MySailingGuide* (Berlin, Germany)

**Senior Software Engineer**

web/HTML scraping (ETL)

*Projects:*

- *web/HTML scraping: collecting data from a sailing / yachting related web-site:* web-server communication through libcurl in Perl on SuSE Linux

*August 2011–September 2011*

*Loyalty Partner* (Munich, Bavaria, Germany)

**Senior Software Engineer**

configuration, build, and deployment management: using the Python scripting language, Maven, Oracle WebLogic Server

*Projects:*

- development of deployment management software.

*June 2011–July 2011*

*groupon* (Berlin, Berlin, Germany)

**Senior Software Engineer**

Jaspersoft's report generation software suite (iReport, JasperReports (BI)); PostgreSQL, SQL.

using Subversion for version and release manangement; methodology: Agile / Scrum.

*Projects:*

- creating and maintaining JasperReports reports wrapping postgresQL queries for their Business Intelligence team.

*November 2010–May 2011*

*Real Garant (Zurich Group)* (Neuhausen auf den Fildern, Baden-Württemberg, Germany)

**Senior Software Engineer**

developing software using Perl and Java on Linux, PDF forms; Jaspersoft's report generation software suite (iReport, JasperReports (BI)).

*Projects:*

- the customer replaced hundreds of PDF forms with JasperReports documents. I designed a dedicated and rather dense XML format as a step in between those two. I implemented software in Perl to extract details from those PDF documents into that XML, and also software to create JasperReports' XML (JRXML) from that intermediate XML data structure.
- the Java code is good for dealing with the JasperReports' files, JRXML etc and creating PDF from it.

*November 2009–May 2010*

*Hamburger Sparkasse* (Hamburg, Germany)

**Senior Software Engineer and trouble-shooting**

developing software using the Python scripting language and also Java, using Oracle 10, all on Microsoft Windows; trouble-shooting.

using Subversion for version and release management methodology: Agile / Scrum.

*Projects:*

- the customer upgraded to "Opics Plus", Misys.com's OTC derivate trading platform. interfacing software had to be created.
- making use of Jaspersoft's report generation software suite (iReport, JasperReports (BI)); that included extending code written in Java.

*May 2008–August 2009*

*Krauss-Maffei Wegmann* (Kassel+Munich, Germany)

**Senior Software Engineer**

developing real-time software in Ada (Aonix's ObjectAda) on Linux and Microsoft Windows, targeted towards an embedded system, communicating there using CANopen over a fieldbus.

creating Ada code from my CANopen XML using Perl, shell, and Ruby Makefiles AKA Rakefiles.

*Projects:*

- the project needed new data messages in the CANopen area (a field-bus communication protocol); the legacy CANopen Ada *marshaling* code looked difficult to maintain and enhance, and it seemed worthwhile generating that code from an XML-ish specification, incorporating the CANopen data objects and messages and also details on bit record layouts; the XML-ish specification itself got

defined by myself, the XML with the project details got filled out (for a couple of projects ), code generators got implemented in Perl.

- communication with several devices through these CANopen messages got implemented.

*March 2008–April 2008*

*Rheinmetall Defence Electronics* (Bremen, Germany)

**Senior Software Engineer**

developing software in Ada (GNU Ada AKA GNAT) and C on Debian Linux.

Ada, shell, and Ruby Makefiles AKA Rakefiles.

*Projects:*

- talking to a NovAtel OEMV GPS receiver through RS232 in C the POSIX way; providing Ada bindings to this interface; using GNU Ada (GNAT) under Debian Linux.
- setting up a proprietary RS422 interface with Linux device driver sources provided by the vendor (FarSync.co.uk); talking to an *Initial Measurement Unit* through that RS422 interface in C; providing Ada bindings to this RS422 interface.

*August 2007–December 2007*

*ImmobilienScout* (Berlin, Germany)

**Senior Software Engineer and trouble-shooter in "Build&Release&Deploy"**

maintaining resp. developing Ruby, Perl, Ant, ... scripts; tagging releases in Subversion; managing hot fixes; dealing with ticket / bug tracking systems; enhancing the documentation in the wiki; operating systems: UNIX (Linux (Redhat resp. CentOS)), Microsoft Windows; continuous integration (CruiseControl), processing virtualisation (VMware).

Ruby, Perl, shell, and Ruby Makefiles AKA Rakefiles.

*July 2006–September 2006*

*HP* (Böblingen, Germany)

**Senior Software Engineer**

software development: UNIX, SGML, shell, Perl, C, DSSSL (SGML style sheets), processing virtualisation (VMware)

*April 2006–June 2006*

*orange.NL (wanadoo)* (Amsterdam, The Netherlands)

**Senior Software Engineer, OSS staff**

Perl, shell, enhancing the documentation in the wiki, OSS: production monitoring using "Big Brother", operating systems: Solaris

*April 2002–July 2007*



*Allianz Asset Management, InvestmentDataServices* (Munich, Bavaria, Germany)

**Senior Software Engineer, OSS (incl. trouble-shooting) staff**

Perl, DBI, shell scripts (bash, zsh), Oracle, PostgreSQL, UNIX (Solaris); training staff. trouble-shooting.

*Projects:*

- design (FSM oriented), implementation and operation (OSS) of a retrieval +extraction+transformation+loading+post\_process+exporting system (ETL) -- (x\_spooling, files.pl)
- JHwis -- Web (Interface) Scripting (using libcurl and Perl): robust scripted traversal of web pages and filling out of form fields in order to download files.

*Achievements:*

- interfacing with the big market data vendors (Bloomberg, S&P, Citigroup, Deutsche Börse, Wertpapiermitteilungen, ...) (ETL)

*December 1998–June 2001*

*Commerzbank Frankfurt, Investment Banking, Risk Management* (Frankfurt am Main, Germany)

**Senior Software Engineer, OSS (incl. trouble-shooting) staff**

OSS: Panorama Collateral (collateral management), RiskWatch and more Risk Management systems; add-ons in shell (bash), Perl, CGI, UNIX (Solaris). trouble-shooting.

*January 1998–December 1998*

*Derwent Information (Thomson Information)* (London, United Kingdom)

**Senior Software Engineer**

data conversion in Perl; shell (bash); web GUI in Perl/CGI; UNIX (Solaris); Y2K work.

developed IMAP utilities using the Python scripting language.

*July 1997–December 1997*

*Salomon Brothers (CitiGroup)* (London, United Kingdom)

**Senior Software Engineer, OSS staff**

*Projects:*

- Perl, shell (ksh, bash), database extractions in Perl/DBI aimed at Sybase and Oracle; design-oriented reverse engineering, creating an ER-model; operating systems: UNIX (Solaris)
- automated scanning of ASCII report files; operating systems: UNIX (Solaris)

*March 1997–July 1997*

*Zurich Insurance (BAT Group); the risk management department* (Zürich, Switzerland)

**Senior Software Engineer and trouble-shooting**

RiskWatch: OSS, customer add-ons in Perl, shell (bash), automating their data retrieval; operating systems: UNIX (Solaris)

*August 1996–February 1997*

*Agfa-Gevaert* (Antwerpen, Belgium)

**Senior Software Engineer, configuration manager**

*Projects:*

- design-oriented reverse engineering, maintenance, development, training, controlling a proprietary RCS-based multi-platform source code control system (implementation details: UNIX (Solaris), Microsoft Windows, Mac OS pre-9; C, shell (Bourne, Korn, C), Perl, Tcl/Tk, GUI builder "SpecTcl")
- maintaining and refining Makefiles of different flavours
- evaluating Microsoft's Visual SourceSafe

*May 1996–August 1996*

*GLI* (Munich, Bavaria, Germany)

**Senior Software Engineer**

GUI implementation in Tcl/Tk for an EDI / EDIFACT system; supplying extensions to the Tcl system, actually in C++; shell (bash); setting up a source code control system based on RCS; training staff on that; operating systems: UNIX (Solaris).

*February 1996–April 1996*

*Peek Traffic* (Manchester, United Kingdom)

**Senior Software Engineer**

implementing test suites in Tcl and "expect"; training staff in Tcl/Tk, "expect", UNIX, shell, GNU emacs; operating systems: UNIX.

*December 1995–January 1996*

*Deutsche Telekom, R&D* (Berlin, Germany)

**a mixed software role**

NNTP server, Apache -- software porting, set up, and training.

*April 1995–September 1995*

*EADS / DASA Space Division (ERNO)* (Bremen, Germany)

**Senior Software Engineer**

Ada, C, Oracle, xview GUI library.

*Projects:*

- Columbus Ground System
- Mission Database Access

*February 1995–March 1995*

*Technomedia GmbH* (Berlin, Germany)

**HTML programmer**

HTML.

*Projects:*

- converting texts from the **frontpage** magazine to HTML

1994–1994

*Sietec Systemtechnik; Project Compact Archive* (Berlin, Germany)

**software engineer**

customization, scripting in awk and Perl, maintaining software in C++ and shell (bash, ksh).

1992–1993

*Sietec Systemtechnik; Project IN-DBPT* (Berlin, Germany)

**software engineer**

*Projects:*

- implementing an automated testing system in Pascal and Perl

1989–1992

*Sietec Systemtechnik; Project OSCAR - software for CT and MR medical systems* (Berlin, Germany)

**software engineer**

using the Teamwork CASE system (following the OOA/OOD methods of Yourdon/DeMarco and Ward-Mellor); developing a code generation system, emitting code for state transition machines described in Teamwork to drive a GUI implemented using the xview library; extracting inline documentation from C sources to provide manuals in Framemaker.

October 1988–1989

*Sietec Systemtechnik; Kleinod's Ada Competence Center* (Berlin, Germany)

**consultant**

Ada lectures, compiler evaluation, ...

March 1988–September 1988

*Sietec Systemtechnik; the Gemini RDBMS* (Berlin, Germany)

**software engineer**

Ada, C, shell (ksh, sh, msh), awk: implementation of the Gemini (later BiiN) Relational DBMS in Ada on OSIRIS.

1987–February 1988

*PCS (Kienzle, Mannesmann), Jürgen Gulbin's office* (Karlsruhe, Germany)

**junior programmer**

*Projects:*

- programming some C stuff like a software packaging facility (shells: ksh, msh)
- a ditroff previewer on X-windows

1987–1987

*Fraunhofer Gesellschaft, Röhrich's institute* (Karlsruhe, Germany)

**research help**

*Projects:*

- porting the RCS to an non-BSD UNIX (C, Make, shell)

1987–1987

*Fraunhofer Gesellschaft / GMD, the Modula-2 group* (Karlsruhe, Germany)

**research help**

*Projects:*

- porting a chess program from Ada to Modula-2 (Ada, Modula-2, Make, shell)
- building and installing the Stroustrup C++ compiler on a non-SysV UNIX
- learning C++
- serving as C++ development environment consultant

1985–1986

*Siemens, E85G, Project Gemini* (Nuremberg, Germany)

**junior programmer**

*Projects:*

- coding test suites for the Gemini (later BiiN) Ada compiler (Make, shell)

1983–1985

*Fraunhofer Gesellschaft / GMD, the Karlsruhe Ada Compiler group* (Karlsruhe, Germany)

**research help**

runtime systems, code generators; work done in C, Ada, compiler construction tools, and assembly language (also: shell); under UNIX, BS2000, VMS, bare 68000 based micro processor environment.

1982–1983

*University of Karlsruhe, Faculty of Computer Science, Prof. Goos's chair ("compiler construction and programming languages"), the Karlsruhe Ada Compiler group* (Karlsruhe, Germany)

**research help**

bits and pieces of the Karlsruhe Adacompile targeted at the Siemens BS2000, the Motorola 68000, and the Vax (also: shell).

*Projects:*

- coding test suites for the Karlsruhe Ada compiler (compiler, Ada, also: shell)

1981–1982

*University of Karlsruhe, Faculty of Computer Science, Prof. Wettstein's chair ("operating systems")* (Karlsruhe, Germany)

**research help**

*Projects:*

- implementing a disk driver in C for Wettstein's operating system (also: Make, shell)

1980–1981

*University of Karlsruhe, data center* (Karlsruhe, Germany)  
**research help**

programming languages (Fortran, Algol) consulting hours;

*Projects:*

- numerical library in Fortran

## Education

**Diploma in Computer Science (aka Informatik)**, February 1988. Thesis on Operating System Design in Ada  
University of Karlsruhe (TH)

*Subjects:* compiler construction and programming languages (Prof. Goos) (), information systems, data base systems (Prof. Lockemann) (), operating systems (Prof. Wettstein) ().

- Operating System Design in Ada (Diploma Thesis (Diplomarbeit))
- a runtime system for Ada running on a bare machine with a MC68000 CPU
- a runtime system for Ada running on a UNIX with a MC68000 CPU underneath
- Generating MC68000 Code for Ada (Small Thesis (Studienarbeit) on a code generator for the Karlsruhe Ada Compiler)

**Abitur (A-levels)**, 1978  
Gymnasium Laupheim

## Professional Memberships

Association for Computing Machinery  
1983–Present

German Chapter of the ACM  
1983–Present

Gesellschaft für Informatik  
1983–Present

## Miscellany

August / September 2011: studying Pragmatic Programmers' "Agile in a Flash: Speed-Learning Agile Software Development"

September 2011 : studying o'Reilly's "Mastering Git"

September 2011: studying o'Reilly's "Big Data Glossary / A Guide to the New Generation of Data Tools" (NoSQL Databases (MongoDB, CouchDB, Cassandra, Redis, BigTable, HBase, ...), MapReduce (Hadoop, ...), Storage (S3, HDFS), Servers (EC2, Google App Engine, Elastic Beanstalk, Heroku), Processing (R, Yahoo! Pipes, Solr/Lucene, ...), NLP = Natural Language Processing, Machine Learning, Visualization, Acquisition, Serialization)

September 2011: studying o'Reilly's "Managing Infrastructure with Puppet / Configuration Management at Scale"

July 2011: *Jaspersoft v4.1 Technical Training* JasperReports, Jaspersoft ETL resp. Talend ... ETL

I hold subscriptions of the following German IT magazines resp. newspapers: ix (aka *Magazin für professionelle Informationstechnik*), c't (aka *Magazin für Computertechnik*).

## Publications

- Jochen Hayek, Michael Thätner, Hans-Stephan Jansohn, Rudolf Landwehr. "Generating MC68000 Code for Ada". *Symposium on Small Systems -- Proceedings of the 1983 ACM SIGSMALL Symposium on Personal and Small Computers*. ACM New York NY, USA. 1983. 81 - 87. ISBN: 0-89791-123-7

## Hobbies

- my son João Gabriel David
- Sports. Fitness, long distance running, cycling

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