

Curriculum Vitae: Bernd Peter Jendrissek

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1 Personal data

Surname	Jendrissek
First names	Bernd Peter
Date of birth	18 May 1976
Sex	Male
Marital status	Unmarried
Driver's licence	Code EC with PrDP (Passengers and goods), and Advanced Driver's Certificate. A code EC licence entitles me to drive articulated vehicles of any gross vehicle mass.
Citizenship	South African, German
Home languages	English, German
Other language	Afrikaans (speak, read, write and understand)
Fully trilingual	I am fluent in English, German and Afrikaans.
Military commitments	None
Criminal offences	None
Health	Excellent

2 Education

2.1 Part-time courses completed

- Software design with UML - Fritz Solms
- 6.002x Circuits & Electronics - MITx

2.2 Higher Education

University attended	University of Cape Town (1995-1999)
Degree	B.Sc. (I qualified for this degree in 1997 but decided to improve my qualification by completing another major, Computer Science.)
Majors	<ul style="list-style-type: none">• Physics (completed 1997)• Biochemistry (completed 1997)• Computer Science (completed 1999)
Other courses completed	<ul style="list-style-type: none">• Mathematics I and II• Chemistry I
Distinctions	<ul style="list-style-type: none">• Physics I• Mathematics I• Computer Science I, II and III
Awards	<ul style="list-style-type: none">• Entrance Merit Scholarship (1995-1997)• Dean's Merit List (1995)• Computer Science: Academic Merit List (1995, 1999)

2.3 High School

Last school attended	Jan van Riebeeck High School (Cape Town) (1990-1994)
Highest standard passed	Matriculated with A symbol average, allowing me entry into any South African university.
Prizes and awards	<ul style="list-style-type: none">• National Science Olympiad: first place (1994); fifth place (1993). In both of these years I attended the London International Youth Science Forum.

3 Employment history

3.1 March 2011 - present

Self-employed

Notable work

- Continuing occasional ad-hoc software development for Rocketseed.
- Website development for Methodist Publishing House <http://www.methbooks.co.za/> (now defunct or replaced with a new version) where I did everything except the visual design.
- Installing surveillance cameras and supporting network to cover residential complex.
- Interface software for a fingerprint reader to be used in an explosives access control system.
- Maintaining my fork of the gEDA electronic schematic capture toolset.
- Contributing support for "OMF" object files to the GNU binutils. Repeated work to avoid copyright encumbrance in previous work with potential claims by a former employer.
- Modifying cpuminer Bitcoin mining software to produce fake results for a mining company's test network.

3.2 July 2007 - March 2011

Name of company Rocketseed South Africa

Post Lead Developer (team size: 1 full-time + 1 part-time contractor)

Notable work

- Maintaining a regular release schedule for the company's sole product, incorporating new features and bugfixes.
- Investigating and, where possible, solving immediate problems that the support team cannot address on their own.
- Reading man pages so that others didn't have to.
- Refactoring codebase after it had suffered years of ad-hoc feature additions. This was to precede major rework involving a change of data storage backend (from LDAP to PostgreSQL).
- Bringing codebase under reproducible control.
- Recruiting a competent short-term contractor to develop a modern-looking user interface for our web-based frontend.

Reason for leaving Reached most personal goals set when joining, remaining work had become monotonous.

3.3 March 2000 - June 2007

Name of company Prism Payment Technologies

Post Software Developer

Notable work

- Porting the highly DOS-specific outdoor payment terminal application to my GNU/Linux development PC while our hardware team were busy producing the host platform for our much-delayed new and improved terminal.
- Writing firmware for an in-house designed ARM-based routing device for a South African retailer's cashier lanes. This project took me two months, from receiving a populated PCB to handing a working device to the server development team ahead of a technology demonstration.
- I extended the GNU binutils to understand the "OMF" object file format, as I needed to find the most resource-hungry modules in our DOS-based application.
- When a senior developer who had been with Prism from the start in 1995 resigned in September 2004, I took over his work on an IFSF-based payment terminal application that accepts EMV transactions at a number of pilot sites in Kuala Lumpur, Malaysia.
- Wrote firmware for a RS/232-based multiplexer designed in-house around a 8051-based microcontroller.
- Developing and maintaining the building and packaging scripts for Prism's PPS (Prism Payment Server) so that it can be easily installed on heterogeneous server hardware at all of Shoprite's retail stores. I also wrote the server software's startup and automated daily maintenance (cron) scripts.
- Implementing a suite of programs to be used as part of a chip-card based commerce system. These programs guided transactions from the point of origin (typically a bank clerk's workstation) to a settlement network and back. I also helped to complete the application that runs on the user-facing terminal (8051 processor based) that captures the most common transactions.

Notable work	<ul style="list-style-type: none"> • Writing a Linux device driver for an ISA-based X.25 communications add-on card designed and built in-house. • Moving a development team from ad hoc file transfers to a properly version-controlled environment using CVS. I then automated most of the release cycle so that our software releases can be reproducible. • Flew to Manila, Philippines on short notice to mind a Sun Enterprise 450 server which was running Prism's AirTrax SMSC on Smart Communications' network. • I ported a sales terminal application to run on a more capable terminal, despite ubiquitous platform dependencies present in the code I inherited. • In preparation of another department moving into our existing offices, I guided our general network handyman in the correct installation of a cabling infrastructure, so as not to repeat mistakes that previously caused the office network to fail to run at 100Mbps.
Reason for leaving	Prism bought out by larger company. Lack of commitment from new senior management team to the completion of projects with which I was involved.

3.4 February 2000

Name of company	Triton Naval Architects
Post	Programmer (Contract work)
Job description	<ul style="list-style-type: none"> • Converting legacy BASIC programs to C++. • Redesigning user interfaces of these programs to use a Windows interface.
Reason for leaving	Project completed

3.5 February 1998 - November 1999

Name of institution	University of Cape Town
Post held	Part-time tutor - Physics: February 1998 - November 1999 Computer Science: February 1998 - November 1998
Job description	<ul style="list-style-type: none"> • Supervising and assisting first-year students during afternoon laboratory sessions/programming sessions and tutorials. • Marking written/programming work done during these sessions. • Invigilating practical examinations. (Physics only.)
Reason for leaving	End of academic year

3.6 December 1997

Name of company	H Heitman & Son
Type of company	Administrators of parking lots

Post held Part-time clerk (December 1997)

Job description

- Making entries in journals to reflect payments by customers.
- Issuing invoices and receipts.
- Handling customers' requests.

Reason for leaving Mr Heitman's secretary returned from leave.

3.7 December 1995

Name of company Maritime Consulting & Design (This company no longer exists)

Type of company Naval architects

Post held Assistant to Mr C Zajczkowski (Contract work - December 1995)

Job description Calculating gross and nett tonnages for MV Zealous, a vessel owned and operated by De Beers Marine.

Reason for leaving Work completed

4 Computer skills

Programming languages/skills

- C/C++ under both Unix and DOS. (I have been programming in C for 19 years now.)
- Assembly languages: Intel x86, writing for both Unix and DOS environments; 8051, second-guessing a proprietary compiler; ARM, single-stepping through firmware; MIPS, using a simulator only; 68000, implemented a task-switching environment (a "poor man's" implementation of POSIX threads), ported same to a NEC v850-based PIN pad.
- I have written a backend for the GNU Compiler Collection (GCC) targetted to 16-bit ix86 processors; while it can produce correct assembly output for some simple C input programs, I am frustrated by an instruction matching failure that prevents me from completing a working compiler port.
- I am fluent in the use of the GNU autotools, which allow one to recompile portable programs to work on any platforms that support the necessary features; I have used these to build programs to run on more than one platform (radically different ones).
- Unix shells (Bourne shell genre)
- Perl
- Javascript + jQuery
- Server-based dynamic web pages, using CGI or PHP.
- I have completed a one-week course on object oriented design with UML.
- SQL
- I understand the workings of the protocols TCP/IP, SMTP, FTP and HTTP as defined by the relevant RFCs. I have firm knowledge of setting up NAT gateways/firewalls with the Linux netfilter features.
- I have a grasp on cryptology fundamentals. I am aware of strengths and weaknesses of symmetric and asymmetric encryption algorithms in popular use.
- Other languages: Prolog; Scheme/LISP; Pascal; INTERCAL; Logo and some flavours of Basic

Electronics

- I am comfortable reading and interpreting large and complex schematic diagrams and have found simple circuit errors this way more than once.
- I am experienced in using oscilloscopes, protocol analyzers and multimeters to isolate faults and to diagnose causes.
- I have designed a "microwelder" from schematic diagram to PCB layout, using the free gEDA / PCB electronic design tools, but need to rework the output stage due to design flaws.

Applications I have used

- Spreadsheets: Lotus 1-2-3; Excel; OpenOffice; Gnumeric
- Word Processors: Lyx; Word; OpenOffice
- Servers for common internet services: Apache; sendmail; exim; BIND; INN; samba; inetd; dhcpd
- IDEs: C++Builder; Custom IDE for Ingenico 8051-based terminals; QuickC; TurboC; Turbo Pascal
- Source control systems: CVS; RCS; Visual SourceSafe
- Compilers: GNU gcc, which I build from source myself; Keil (8051); IAR (ARM); QuickC; TopSpeed C; Turbo C; Borland C++ Builder;
- Electronic design: UCB Spice; Icarus Verilog; gEDA gaf; PCB, a printed circuit board layout tool maintained by a community of its users
- Other UNIX utilities, including: awk; bison/yacc; flex/lex; gprof; make; rcs; sed; traceroute; wine

5 Interests

Electronics

I often read books on electronics (I intend to take the Radio Amateur's Examination soon), electric machines and power distribution.

Astronomy

I have started building my own reflecting telescope. Its magnification factor will be around 30.

Reading

I enjoy reading the newspaper regularly. I have been reading National Geographic Magazing for almost 20 years; I enjoy reading their interesting articles.

Cycling

I enjoy cycling occasionally. (I have completed the Pick 'n Pay / Cape Argus cycle tour in 1998 and in 1999.)

Social

I occasionally attend Salsa classes at a club in central Cape Town, and have taken Ballroom dancing lessons at UCT too. I also regularly meet friends for group hikes on the Cape Town mountains.

6 References

Name

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Name Mr TN Murphy

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Name Mr A Benzakein

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What he says I worked with Bernd Jendrissek at Prism from July 2001 to August 2002. I found him to be an extremely dedicated, capable and knowledgeable Developer, Designer and System Administrator. During the time I was at Prism he was involved in various C development projects. He was also called upon to perform Linux administration, CVS administration and was solely responsible for the releases of our product. He frequently gave very good technical input into the design of various parts of our product. It was a pleasure to work with him and, if the opportunity presents itself, would like to do so again in the future.

Name Mr AR Powell

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What he says Bernd is a conscientious, hardworking individual. He is self-motivated, requires no supervision and consistently delivers more than is expected of him. He works well as part of a team, often helping other team members when they are having difficulties. He remains calm under pressure, completes his tasks timeously and competently and manages to exude a confidence that helps ease the tension. His knowledge of technical matters and the speed with which he gains new skills and knowledge is remarkable. He manages to become a very important part of any team without resorting to grandstanding, political maneuvering or by criticizing fellow employees. It is not often one encounters such individuals. I would whole heartedly recommend Bernd to any prospective employer.