

Patrick J. Timlick	Software Engineer
Timlick & Associates Inc.	Office: 503-476-3119
10990 NE Paren Springs Rd.	Home: 503-538-8241
Dundee OR 97117	

Overview

A versatile, well educated and highly skilled engineer of software and systems for high tech industry, business and government. Specialties include software design, enhancement and debugging of existing systems. I have a large repertoire of skills and techniques that can apply to familiar and unfamiliar problem domains with good outcomes.

Education

- M.S. Electrical Engineering, University of California at Santa Barbara. Software and Hardware Architecture, ARPA Wide Area Net, Digital Signal Processing.
- B.A. Physics and Mathematics, Western Washington University. Computer Programming, Semiconductor Physics, Numerical Analysis, Electronics.

Professional Experience

Applied Test Equipment (ATS) 2002-present

ATS acquired a line of automatic electronic test equipment that ran on obsolete Sun workstations. The device drivers were written in Sun C and applications in Sun Pascal. ATS needed to convert the system to Linux. The tester was connected with a VME bus connected via a third party driver. Final system is testing parts worldwide and is faster, less expensive and more reliable.

- Re-engineered the driver to use one from National Instruments, using a HP logic analyzer. to discover the minute details.
- Converted the code base to GNU C.
- Streamlined and simplified the build environment using GNU make and Perl scripts.
- Analyzed Pascal compilers, chose GNU pascal and converted the libraries and development environment.
- Converted a curses based semiconductor test operator console interface and fixed myriad long standing bugs.
- Enhanced the application interface, and fixed hundreds of bugs using tools like valgrind and pclint.
- Ported Motif based digital signal processor GUI to Linux "lesstif". Interfaced to the hardware with shared memory and SQLite. Updated documentation.
- Re-implemented digital pattern generator assembler using Python Yacc (PLY).

Human Resources Software Developer 2001

- Created Python programs to parse XML page definitions, build HTTP "Get" queries and check the returned result with HTMLparser.

Digital Media Workshop 2001

- Captured MJPEG encoded video with Zoran based capture card, custom Linux kernel and RAID0 (high transfer rate disks). Transformed captured MJPEG to edited and enhanced MPEG1, MPEG2, and MPEG4.

Semiconductor Manufacturer 2000-2001

- Designed and implemented ASP-Sql Server-Python-DHTML system to generate tightly formatted television program guide for hand-held wireless display. XSL programs to format XML news and weather for display on prototype small wireless hand-held device.

Nutrition/Diet Analysis Software Developer 2000

- Designed and implemented Enterprise Java Beans (EJB) to efficiently deliver high dimensional nutrient data from Oracle database to Applet or Servlet. The EJB transforms a relationally normalized nutrient database to a collection of collections of named food attributes. Type safe enumerations for attribute identifiers were developed to enhance code reliability. Ported Food/Nutrient database from MS-Access to Oracle 8i using SQL*Loader.

Insurance Company 1999

- Calculated the value of a flood loss to a university library by extrapolating from thousands of book bids on a large random sample of library contents. Transformed book supplier response files into SQL Server tables for statistical analysis. Created Perl scripts to parse and transform the bid data into SQL tables. Developed sophisticated SQL queries to extract the statistical information

Printer Manufacturer – Internet Printing Group 1999-2000

- Designed and created page layout XML using W3C DOM. Parsed XML on client side with MSXML ActiveX control. Designed and implemented Java Servlet that created PDF files from page layout primitives, implemented with Java-JNI calls to C PDF Library running on HP-UX.

Internet Medical Data Provider 1999

- Ported Java Medical Thesaurus Application from Oracle 8 to Microsoft SQL Server 7. Converted Data Definition Language and developed BCP load scripts for multi-gigabyte

database. Qualified JDBC driver and debugged and converted data manipulation language statements to be compatible with both systems.

Printer Manufacturer – Image Enhancement Group 1998-1999

- Designed and implemented a special purpose relational database. Used standard design patterns and C++ templates. Image data is stored in this database by a modified application and later accessed by a printer driver to speed and enhance printing. Time to start printing was sped by a factor of 10.

Semiconductor Company – Internet Support Center 1997-1998

- Created autonomous agents to monitor Internet and extranet servers. Implemented agents in Java using Voyager. Agents would move selves to a specified server, scan a specified log file and write XML matches to a JavaBeans listener.

Medical Drug Database Company 1997

- Created Component Object Model (COM) Server Interface for Drug Tool Kit. Implemented Drug Selection and Interaction Checks. Tested Interface with Visual Basic and Java.
- Created a C++ Standard Template Library utility to copy an ODBC database to another ODBC database.

Medical Drug Database Company 1996

- Designed, coded and debugged a combination OLE Automation Server and OCX Client to link a Visual Basic NT to Newton wireless LAN communications server to a patient database OCX control. Implemented in Visual C++ .
- Rewrote critical SQL queries to reduce run time from minutes to seconds. Saved company from a developing special software for the same result.

State Retirement System 1995

- Redesigned, re-coded, tested and released a failed Powerbuilder application that implemented state legislature mandated laws for splitting a retirement account/

Previous Projects

- Independent Software Consultant
- Database system developer for mainframe and mini computer companies.
- Developed Electronic Test Equipment software
- US Army Veteran - Honorable Discharge
- Details available on request