

## Patrick J. Timlick - Senior Software Engineer

Timlick & Associates Inc.	www.timlick.com
10990 NE Paren Springs Rd.	Dundee OR 97117
p.j.timlick@ieee.org	503-476-3119

### 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

#### Intel New Business Initiatives 2011

Android application development to support alternative cellular phone business models. Metered and controlled internet by website and by application. Rooted an android tablet, scraped Iptables output, aggregated results in Sqlite, transmitted results to server using Json. Implemented, configured and supported a small proof of concept program. Analysis of bandwidth requirements using Squid, Iptables and Wireshark

#### Kimera Systems Android Home Screen App Widget 2010

A location aware home screen widget that periodically transmits the phone's location to a server, then changes appearance and behavior, based upon a response from the server. When the user touches, the application, it navigates to a custom browser window to display a server specified content. The Browser window furnishes a custom API for Javascript within the displayed HTML pages.

#### Android Marketplace "Carpenters Calc" 2010

An Android calculator for carpenters, cabinet makers, machinists. Carpenter's calc has direct manipulation of Foot Inch and Fraction measurements for the easiest data entry of any calculator. It also converts to and from metric system "decimal pointed" measurements. Results are rounded and displayed to a configurable accuracy, usually the accuracy of the measurement device. Average user rating 4.7/5.0 in Android Marketplace.

**Applied Test Equipment (ATS) 2002-2009**

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. 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.
- ∞ 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.
- ∞ 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).

**Avedo Human Resources Software Group 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.

**Intel 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.

**Dietlog Inc. 2000**

- ∞ Designed and implemented Enterprise Java Beans (EJB) to efficiently deliver high dimensional nutrient data from Oracle database to Applet or Servlet. Ported Food/Nutrient database from MS-Access to Oracle 8I using SQL\*Loader.

**Allianz Insurance 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

### **Hewlett-Packard – 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.

### **First Data Bank - 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.

### **Hewlett-Packard – 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.

### **Intel – 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.

### **First Data Bank Medical Drug Database Company 1996 - 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.
- ∞ Rewrote critical SQL queries to reduce run time from minutes to seconds. Saved company from a developing special software for the same result.

### **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