

Patrick J. Timlick - Senior Software Engineer

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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, Wide Area Networks, Digital Signal Processing.
- B.A. Physics and Mathematics, Western Washington University. Computer Programming, Semiconductor Physics, Numerical Analysis, Electronics.

Professional Experience

Intel MICA Android Wearable 2014-2015

Agile project project to bring “My Intelligent Communication Accessory” to market. Develop and debug Notification, Short Message Service, Calendar, and Email, applications for a very specialized wearable device. Used Android Studio, Gradle, Jira, Artifactory and other modern development tools and services.

Flashtiming 2014

Designed and implemented a Raspberry Pi – Mobile App controller for Track Meet display clock. Pi controller is implemented with Nodejs. The AngularJS Mobile client connects to Pi with WiFi. The Pi controls starting, stopping, resetting and display of the main large display clock. Setup and used Bitbucket Git repository and Webstorm IDE.

Carpenters Calc 2013-2014

Updated Carpenters Calc to support Tablets and Notepads. Converted development environment to Android Studio with Gradle and Git. Released new version to Google Play and Amazon Marketplace. Tested implementation with appthwack.com.

Dark Horse Comics 2012-2013

Member of an Agile development team doing Android, Ipad, Iphone and Web development.

- Implemented Java dynamic image decimation to display large images on small memory Android devices.
- Efficiently AES encrypted and decrypted image files on Android and IOS.
- Eliminated IOS Objective C archive library with C language implementation.
- Created Optimized PostgreSQL indexes to make long running reports faster.
- Removed Website bottlenecks identified by New Relic with engineered database indexes.
- Prevented man in the middle attacks on SSL connections.

Tour Buddy Systems 2012

Android Java application design and development to provide a framework for a suite of trivia quiz games. The games feature animated screens, buttons, text and graphics, and fun audio playback effects.

Unisearch 2012

HTML5 Mobile website for legal service corporation. Created with Javascript - JQuery Mobile.

Intel New Business Initiatives 2011

Android Java application design and 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 and REST. Implemented, configured and supported an end to end proof of concept system. Analyzed bandwidth requirements using Squid, Iptables and Wireshark

Kimera Systems Android Home Screen App Widget 2010

Design and development of 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. The Browser window furnishes a custom API for Javascript within the displayed HTML pages.

Android Marketplace "Carpenters Calc" 2010

Design and development of 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. Tested implementation with JUnit tests. 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.
- Converted and enhanced the middleware, fixed hundreds of bugs using tools like valgrind and pclint.
- 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 Wireless Handheld 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 middleware using 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.

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 middleware that created PDF files from page layout primitives, implemented with Java-JNI calls to C PDF Library running on HP-UX.
- database.

Previous Projects

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