

Thomas Pfau

1407 Thomas Ave
North Brunswick, NJ, 08902
(732) 422-1466
tfpfau@gmail.com
<http://nbpfaus.net/~pfau/>
<http://www.linkedin.com/in/thomaspfau>

Summary

System programmer with extensive experience in asynchronous communications, network communications, multithreading, and interprocess communication on OpenVMS and linux platforms and a demonstrated ability to learn and master new technologies with a limited amount of formal training. Extensive experience with a broad range of operating systems, programming languages and databases. Development experience includes OpenVMS device driver and internals, end user applications, external device interfaces, X Windows and Microsoft Windows GUI applications, and web-based applications.

Expertise

Operating Systems

OpenVMS, Linux

Programming Languages

C/C++, Perl; less recently Java, PHP, BASIC, Pascal, FORTRAN, COBOL, various assemblers

Other

DCL, bash, zsh, HTML, CSS, CGI, Javascript, Apache, WASD, IIS/ASP, DECnet, TCP/IP, Oracle, PostgreSQL, MySQL, Redis

Employment History

NEX Group (previously ICAP) – Technical Lead, 7/10 - present

I work for the EBS Brokertec division of NEX which provides an electronic platform for FX trading between large banks and hedge funds.

- ◆ Worked with a team of developers to maintain and support the company's trading platform. This included the matching engine and peripheral systems. All components required high throughput and low latency.
- ◆ Worked with product and architecture teams to design new products and enhancements to existing products. Worked alone or led a team of developers to bring these designs to production.
- ◆ Worked with QA to ensure product testability during design and implementation and readiness for deployment after development.
- ◆ Modified the tradng system to allow multiple matching threads. The new thread model overlapped I/O and matching which increased system performance even with a single matching thread.
- ◆ Ported components from OpenVMS to linux mostly on my own. This included rewriting the TCP I/O module using epoll in place of OpenVMS ASTs and rewriting the message queueing module. Most of the work was accomplished by writing platform libraries for both OpenVMS and linux that contained all system calls.
- ◆ Developed lockless queueing and circular buffer modules to increase system throughput.
- ◆ Led a team of developers to implement the company's new multicast market data system. The team completed the work well ahead of expectations and with few problem reports.
- ◆ Took over development of a prototype messaging/logging system based on Redis with an added backend to Postgresql that was originally developed by one of the system architects as a proof of concept. The resulting system is now in use by many components in several groups. Developed a client application that distributes selected messages to remote instances in real time.
- ◆ Developed several tools that connect to active systems or their logs for troubleshooting, project planning, and to analyze system performance.
- ◆ Assisted other programmers to make best use of operating systems, various internal and external applications, and programming languages.

Vintner's Circle Franchising LLC – Director of Technology, 8/09-6/10

Vintner's Circle Franchising provides technology and operations support to its chain of stores. Customers make wine in the stores or purchase supplies to make wine in their homes. I am the sole developer providing new subsystems on the company website (OS Commerce) that are used by franchisees to run their stores.

- ◆ Developed inventory management extensions to allow stores to manage orders with vendors, receive shipments of products, manage invoices and payments, and track store assets.
- ◆ Implemented support for gift cards and deposits.
- ◆ Implemented calendar and batch management systems to allow the stores to track and schedule customer winemaking sessions and other events.
- ◆ Implemented routines to calculate and report store sales summaries and royalty payments due.

Schering-Plough Corp. (now Merck) - Lead Analyst, 5/03-9/09

I maintained the software that runs the company's automated hi-rise warehouse in Kenilworth, NJ. The system runs on OpenVMS and is comprised of DCL command procedures, C programs and Datatrieve reports.

- ◆ Worked closely with warehouse management and users to understand their workflow and ensure system changes would work smoothly with existing warehouse procedures.
- ◆ Designed and implement system enhancements and bug fixes within a regulated validated environment.
- ◆ Successfully ported the system from VAX to Alpha hardware resulting in more than halving the hardware support costs. This also improved system performance and stability.
- ◆ Developed a set of DCL procedures and Perl routines that used DEC CMS/MMS to manage projects and allow management and installation of changes as sets.
- ◆ Implemented a web-based system to display orders on large TV screens in the warehouse area. This improved the efficiency of fork lift operators by directing them to staging areas and improved planning efficiency by providing near real-time status of orders to planners using a web browser.
- ◆ Supported users with day-to-day problem resolution.
- ◆ Provided support for the Central Weigh users of Werum's PAS-X software.
- ◆ Maintained an Access database system used to track product returns.
- ◆ Finished development and validation of extensions to a training data collection system (ASP, Oracle) originally created by an external consultant. This system performed many checks previously performed manually by trainers saving hours of trainer time for each training event.

NetProfits Internet Consulting - 1/03-5/03

I assisted in the development of an internet sales web site (ASP, SQL Server)

- ◆ Provided major contributions to application and database design.
- ◆ Implemented business logic modules and database access routines.

emCrit Corporation - 9/01-12/02

emCrit Corporation (previously Rane Technologies) was a startup attempting to develop a phone switch suitable for provisioning multiple customers in shared building environment.

- ◆ Designed and implemented a Java application used to administer the company's phone switch product.
- ◆ Designed CORBA interfaces used by the administration program and other modules to communicate with database access programs.
- ◆ Designed and implemented system, network, and database access modules (C++).
- ◆ Assisted in the design of database tables and procedures (PostgreSQL).

Maher Terminals - Systems Analyst, 6/96-9/01

Maher Terminals is one of the largest multi-modal terminal operators in the New York/New Jersey region.

- ◆ Designed and implemented communications subsystems involving X-Windows and interprocess communications using DECnet and TCP/IP (C).
- ◆ Designed and implemented multithreaded messaging and database update servers (C++).
- ◆ Maintained the corporate web site including Oracle stored procedures, Cold Fusion web pages and programs for loading the Oracle database.
- ◆ Converted the corporate web site to Perl to run on VMS. This enabled the implementation of data entry applications for use by port customers.

- ◆ Designed and implemented a program for editing a graphical representation of a multi-modal terminal yard layout (C++).
- ◆ Wrote Perl programs that automated removal of EDI attachments from e-mail messages and forwarding of those attachments to other systems for processing.

Toys 'R' Us - Systems Analyst, 10/94-5/96

- ◆ Wrote a terminal emulator program that allowed multiple users at stores, warehouses, or corporate offices to interact with the corporate mainframe. This eliminated the need for dedicated hardware and redundant network lines. This emulator proved many times more efficient than the commercial solution previously used in some locations.
- ◆ Designed, implemented and maintained various DECnet and TCP/IP based file transfer procedures including development of a callable FTP library (C).
- ◆ Designed and implemented a multi-platform communications subsystem and API which would allow application programmers to easily write client/server applications across a TCP/IP network (C).
- ◆ Assisted internal support group in troubleshooting of various system and network problems across a wide area multi-protocol network.

Digital Equipment Corporation - Software Specialist/Consultant, 7/83-10/94

- ◆ Many projects and assignments involving VMS system tuning, VMS device drivers and associated utilities, communications systems, and various other projects on VMS, RSX-11M/M+ and Unix/linux platforms.

Digital Equipment Corporation - Field Service Engineer, 9/81-7/83

- ◆ Responsible for maintenance of VAX and large PDP-11 systems and associated peripherals.
- ◆ Developed a parts order system for the logistics manager automating a manual procedure that saved him several hours each week.

Personal Projects

FTPLib API

Provides an API written in C that allows a program to access files through an FTP server. This library has been used on VMS, linux, Windows NT/2000, and various Unix operating systems.

Java Worship Song Database

A Java application/applet that indexes worship song sheet music for my church. The database can be searched for songs containing a user entered phrase; lyric sheets can be printed out with or without guitar chords; guitar chords can be automatically transposed to different keys; song list can be sorted by key, title, or author.

Perl Modules

I have authored several Perl modules including both pure Perl modules and XS code. Four of my modules are available from CPAN.

Personal Web Site

Contains some information about me, some web applications I have written, and provides access to other software I have written.

Education

Entegreat, 10/08

Werum PAS-X User course

Werum, 2/08

Werum PAS-X System Administrator course

The Learning Tree, 11/00

Java programming course

Digital Equipment Corporation (onsite at Toys 'R' Us), 10/94-5/96

Courses on OSF/1, POSIX programming, shell programming, Windows NT for VMS programmers.

Digital Equipment Corporation, 9/81-10/94

Training courses on Digital hardware including VAX 11/780, PDP 11/70, various tape and disk drives. Software training on RSX and VMS internals, device drivers, system troubleshooting, system programmer.

Metropolitan Technical Institute, 9/79-9/81

Digital and Analog Circuit Analysis and Design. Microcomputer Interfaces. Programming in BASIC, FORTRAN and PDP-11 assembler. Microcomputer programming (Intel 8080, Motorola 6800) .

Fair Lawn High School, 9/76-6/79

Basic electronics courses. Programming in BASIC, FORTRAN and PDP-8 assembler.

References provided upon request.