

# Curriculum Vitae for Craig A. Prall

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## Qualifications

Over 26 years experience in software design and implementation. Expertise in enterprise-wide, distributed object, client/server, and real-time "mission critical" systems. Quickly comes up to speed on new software and hardware technology. Excellent at rapidly analyzing software problems and fashioning first-rate solutions by producing very complete, workable detailed designs. Instrumental in writing high-quality code to see those designs implemented as a successful product. Skilled at working with customers, their management and their end-users to determine the real requirements and satisfy the customer.

## Software

*Operating Systems:* Linux (RedHat, Mandriva and Ubuntu), Solaris, HP-UX, Windows Vista, Windows XP, IBM MVS

*Programming Languages:* Most recently and primarily used Java, JavaScript, and Transact SQL. Have extensive past experience in C/C++ and Unix shell scripts. Have some work experience in FORTRAN, PL/I, BASIC, Ada, COBOL and IBM Assembly language and a working knowledge of Perl, TCL, COBOL, and Visual Basic.

*Java and Web-Related Experience:* Extensive server work using Tomcat versions 4, 5 and 6 (with Apache2) and BEA WebLogic; EJBs (with WebLogic). Extensive Java to relational database experience with JDBC and Object Relational Bridge (OBJ) and database reporting using JasperReports (and iReport); Good knowledge of HTML, CSS, JSPs (with custom tags), Struts and Tiles along with the JSF and STL tag libraries. Recent experience with Google Web Toolkit for front-end development. Development environment used Eclipse IDE and Ant with both CVS and SVN for version control.

## Design Methodologies

UML, Rumbaugh OMT, Yourdon Structured Analysis, Paradigm Plus

## Professional Experience

October 2007 – Present: Avineon, Inc., Alexandria, VA

- *System Analyst.* Working at the FEMA Mt. Weather Emergency Operations Center (MWEOC) in support of the National Fire Incident Reporting System (NFIRS), which records fire and EMS incidents. NFIRS has over 6000 users from all U.S. states, several U.S. provinces, and the Dept. of Defense. Currently working on replacing antiquated, proprietary reporting software. The new reporting system gives NFIRS users a much larger set of selection criteria for obtaining just the set of records needed and also provides a wide variety of output formats beyond the PDF-only capability of the proprietary system. The new implementation makes wide use of open-source software including Google Web Toolkit (GWT), JasperReports, JDBC and Object Relational Bridge (OBJ) along with custom, but government-owned Java software. Apache and Tomcat are the web server and servlet containers, respectively. The main reporting server is a standalone Java application. As with the other NFIRS projects (to follow), Ant & Eclipse are used as the development environment and Subversion (SVN) is the version control system. Also, one of two on-call software developers that handled problems and special requests from the users of NFIRS and the NFIRS help desk. New functions and bug fixes were implemented and incorporated into new software releases (2-3 times/year).

January 2000 – September 2007: Assured Technologies, Inc., Leesburg, VA

- *Senior Software Engineer.* Original task on NFIRS was to modify the data entry and administration (Java) applications supplied to users. Replaced the proprietary network communication method (VisiBroker) with a secure, open-source solution using HTTPS connections to Tomcat servlets (and Apache2 performing load balancing.) Next, revamped several existing server components, which increased reliability from nightly restarts to restarting quarterly (or less).
- *Senior Software Engineer.* Subcontracted to Comsys, Inc and working at Network Solutions (Verisign) on their completely custom, Java-based billing software for their domain registration service. (2002)
- *Senior Software Engineer.* Senior Software Engineer with a small group that developed a Java (J2EE) Business-To-Customer (B2C) and Business-To-Business (B2B) enterprise framework for Outpost.com's web site. The framework supported object mapping with caching, a full persistence support, work flow management with rules engine support, and flexible logging support. Also supported web commerce with components for product browsing, product editorials, product cross sell and up-sale, product searches, shopping cart support, and secure checkout including tax and shipping calculations. The framework was constructed to be application server neutral, but the first release was deployed using BEA WebLogic Server. The framework was built using Java 2 Second Edition (J2SE) version 1.2 & 1.3

on top of J2EE version 1.3 and extensively used EJB, Java Servlet, Java Server Pages (with custom tag libraries), JDBC, and XML. (2000-2002)

June 1999 – December 2000: Spotcast, Inc., Delaware

- *Vice President, Technology, Call Flow Systems.* Joined Spotcast, Inc. as Director of Systems Development after the initial consulting contract (next entry) ended. Led a team of mostly senior developers to enhance the system as described below to work with other telephony operator's equipment and to support more types of cellular calling plans. Met with potential new customers, gave technical presentations that described the system, discussed methods for integrating our system with the customers. Acted as project leader for a complete redesign (using Rational Rose and UML) to create a flexible, robust distributed computing environment using CORBA, C++, and Java. The new design linked the audio on the cell phone with the web, WAP, SMS, and email. It supported delivery of both ads and information content, where the content was either ad-sponsored or subscription-based.

November 1998 – Present: Prall Software Consulting, LLC, Leesburg, Virginia

- *President.* Sole proprietor of Prall Software Consulting, worked as an independent software contractor. Subcontracted to Perceptus Technologies, Inc. to design and implement software for a cellular telephone service. The calls were subsidized by short, personalized advertising inserted prior to connecting the call. During this time, the original release of the system was designed, implemented, and installed and integrated at the first client's site in Hong Kong. The software was developed using C++, Java (v1.1 with JDBC and Swing), HTML, JavaScript, and SQL. Database used was Microsoft SQL Server 7.0 and ran on Windows Server and Linux servers.

July 1996 – Oct 1998: Concept Five Technologies, Inc., McLean, Virginia

- *Legacy Access Team Leader.* Designed and implemented of a distributed system for communicating with legacy applications on IBM MVS-compatible mainframes, SQL databases, UNIX workstations, and Microsoft Windows NT workstations using CORBA distributed objects. Responsibilities included the entire initial systems design (using OMT and UML methodologies using Paradigm+ as the modeling tool), development planning, leading the project team for implementation, implemented several critical components, final integration, and assisting Concept Five and Hitachi QA engineers with acceptance testing. Development was in C++ on Windows NT and Sun (Unix) platforms.
- *Component Integration Manager.* Developed an object framework for a large-scale collaborative computing environment. Implemented routines for integrating a commercial audio-visual teleconferencing package for Windows 95 workstations using Microsoft Visual Basic used in a health care information network. Taught classes in Rumbaugh Object Modeling Technology to the team.

January 1996 - July 1996: Mitretek Systems, Inc., McLean, Virginia

- *Lead Engineer.* Wrote application to extract and display data content of CORBA objects on dynamically generated HTML pages with special HTML tag extensions. Program written in C++ on Sun Solaris (UNIX) platform and operated a CGI-bin extension to the web server.

March 1988 - January 1996: The MITRE Corporation, McLean, Virginia

- *Lead Engineer.* Wrote applications demonstrating a capability of using CORBA objects and TCL scripts embedded in HTML pages to distribute the object's contents over the web for the purpose of distributing intelligence information. Worked on the development of a new intelligence analyst workstation using C, the X Window system, and Motif that integrated several UNIX COTS software packages with several small, custom-designed applications to perform intelligence tasks over a classified intranet. Designed and implemented a software interface (in C on HP/UX UNIX workstations) between a U.S. Army command and control system and a message communications system. Used CORBA encapsulation of pre-existing applications to integrate command and control and infantry-level simulations written by different branches of the military. Wrote and performed operational and performance test procedures for a joint intelligence correlation system. At various times, performed studies and advised various government agencies and the U.S. military on emerging object technology. Top Secret/SCI clearances during this time.

March 1984 - March 1988: Loral Systems Group, Defense Systems Division, Akron, Ohio

- *Scientific Analyst Programmer.* Managed a team to develop a real-time aircraft radar simulation system, which featured realistic environmental effects derived from Defense Mapping Agency (DMA) and U.S. Geological Survey (USGS) map data. Designed and developed the executive software that controlled multiple applications that created the terrain and feature GIS databases used in the US Air Force F15-E Weapon Systems Trainer and other classified aircraft's visual systems. On the same project, developed database analysis software to determine proper positional relationships of some features and automatically correct anomalies. All software was written in (VAX or Gould SEL) FORTRAN.

March 1982 - March 1984: The Harris Corporation, Government Systems Group, Melbourne, Florida

- *Senior Engineer.* Implemented the antenna tracking software for the Global Positioning System (GPS) ground station used for real-time command and control of low-orbit GPS satellites. Designed and implemented the applications that controlled and configured the majority of the hardware devices within the ground station. Wrote part of the acceptance tests and took part in the acceptance testing. Was also part of a team that was responsible for the design, implementation, and acceptance testing of software used to test three adapters that performed translation of satellite data for transmission on networks using different proprietary protocols.

### **Education**

M.S. Computer Science & Certificate in Software Engineering, George Mason University

B.S. Computer and Information Science Engineering, The Ohio State University

### **Hobbies and Diversions**

Operate as my own ISP. The domain names "pcweenie.com" and "pcweenie.net" map to a Linux server in my home office serving as firewall, router, email server, SSH/SCP server, and web server (www.pcweenie.com). A 20/5 Mbps Verizon business FiOS connection is routed through a Ubuntu Linux server to both wired (Fast Ethernet) and wireless internal networks to four Windows-based PCs, three Windows-based laptops, two network printers, an Xbox 360 and a TiVo DVR. The Linux server and desktops were custom built by me. I enjoy perpetually upgrading and tinkering with all of the above.