

18+ Years Professional Experience • Sun SCJP 5.0 Certified • Web / Server-Side / Stand-Alone

An accomplished software developer specializing in Java. I have an extensive track record of meeting or exceeding clients' expectations and finding innovative solutions for difficult problems. These results are attributable to the following:

> **Sound principles of systems architecture** — These essential principles have as their end the simplicity, clarity, efficiency, modularity, and adaptability of design, as well as the maximization of visibility and control over the most essential code. These principles are embedded in many methodologies, such as Object Oriented Design, Loose Coupling, and various abstraction strategies and frameworks. However, these methodologies often fail to achieve these ends unless their implementation is guided by a clear understanding of these underlying principles. An optimal design is the single most important factor in the efficiency and success of the subsequent phases of development, and the performance and usability of the resulting software.

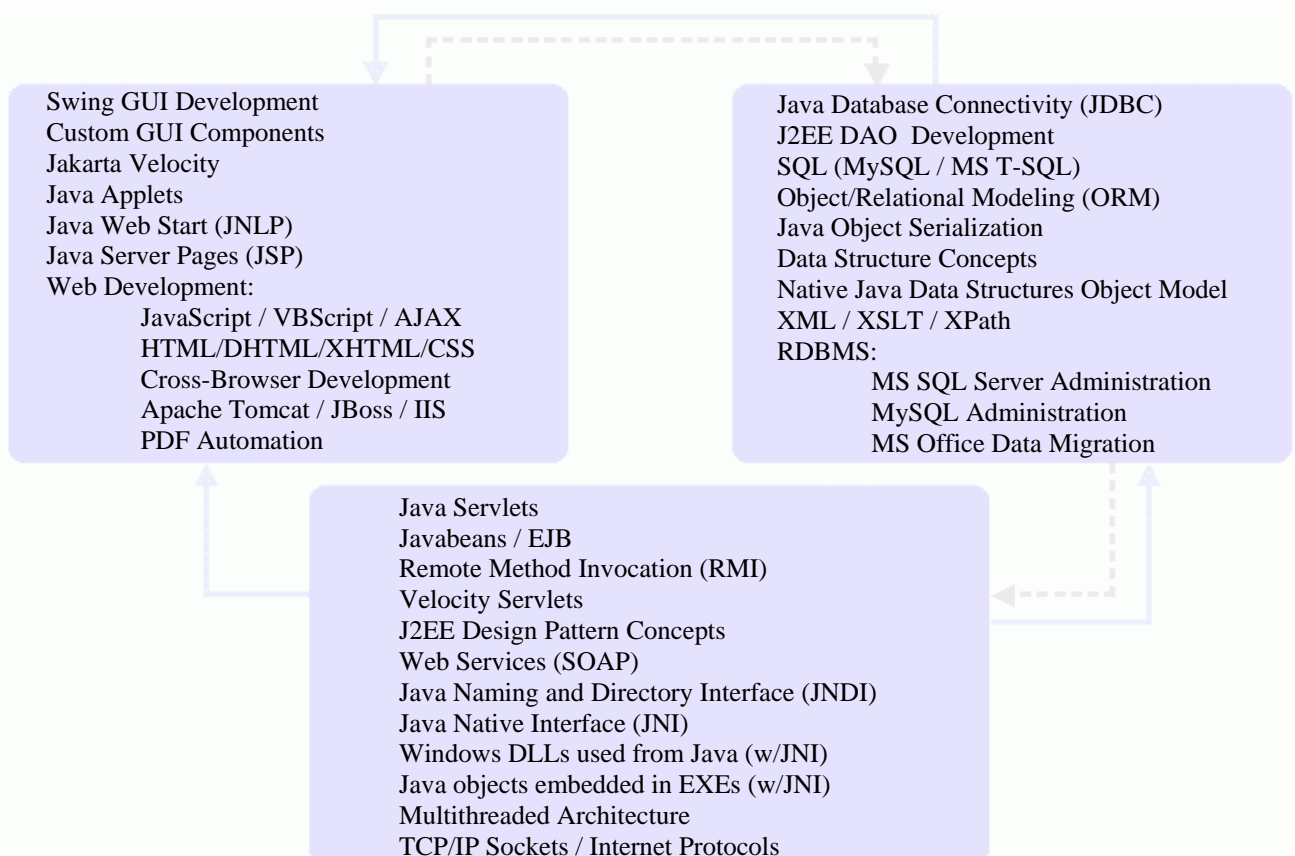
> **Imagination** — Software development is an inherently creative processes. When identifying requirements, imagination is essential for finding better ways to bring the user information and better, more intuitive control over the process. As development progresses, it moves increasingly from the abstract to the tangible, and so brings a continuously new perspective on the design. Therefore a creative developer will regularly, through a few minutes of reflection, be able to eliminate hours — or even days — of unnecessary development, along with the resulting unnecessary complexity in the code, sometimes accompanied by a corresponding unnecessary complexity in the user interface.

> **Work Ethic** — I take my work, and the effects of my work, very seriously. My primary focus is on how to maximize what the user is able to accomplish, and to minimize the obstacles to accomplishing it. This is the essence and importance of the work, and what has always been my motivation in pursuing software development, i.e. imagining the best things that can be made possible, and then making them possible. I therefore favor ideas that favor these ends, regardless of where those ideas come from, and I resist ideas that impede these ends, regardless of their popularity.

> **Experience** — Experience is the best teacher of what works and what doesn't work in terms of system design, and equally important in terms of diagnosing problems. I've been a full-time professional software developer for 18 years, and have been programming for 28 years.

## Key Technical Skills

In my career I have specialized in C++, Visual Basic, Delphi, and Java. My current focus is on Java. The following chart shows the key Java-related technologies I have used, separated into a Model-View-Controller diagram:



## Professional Experience

### **Independent Contractor**

*January '07 — Present*

My primary client during this time has been RG/2 Claim Administration LLC, for whom I have been adding features and capabilities to their CleverPay system, which I designed for them starting in 2004 (see below). My other clients during have mostly included former clients of Wilson Hewitt, and Associates, inc. (see below), for whom I have made various enhancements to software systems that I previously developed or maintained. I also continued doing work during this time for my own company, X-IM Software.

### **Duane Morris LLP**

*March '04 — January '07*

*Workflow Developer*

*October '04 — January '07*

*Senior Delphi Developer*

*March '04 — October '04*

I was brought in as a consultant to take over development of CleverPay, a software system which had expanded beyond its initial design, and which had been scoped for significant further expansion. I added functionality urgently needed by the customer (RG/2 Claims Administration LLC, an ancillary business of Duane Morris), while simultaneously reorganizing its underlying architecture for expansion. Their business requires them to process individual claims for a class-action law suits, each with its own legal requirements. I designed a generalized damage calculation model, which allows claims administrators to parameterize each case's varying court-ordered damage calculation methods without requiring additional software changes. I then added functionality for detailed customizable reports, role-based security, check printing, a claimant web interface, a barcoding system, and wrote technical documentation for the code.

After CleverPay development was complete, Duane Morris offered me a position as a staff developer. In this position, I developed several web-based intranet applications and workflow processes. During this period I took the initiative to solve several problems adversely affecting firm-wide performance, such as an intermittent SAN performance problem causing various network applications to time out. I was able to gather evidence conclusively linking the problem to a misconfigured piece of third-party software. I also developed an automated process to regularly perform WMI queries across all roughly 2,000 workstations in the firm, to record model and serial numbers for computers, monitors, and hard drives, plus record network adapter settings and other useful information.

### **X-IM Software**

*June '03 — present*

*Proprietor*

Designed and developed X-IM, a free Instant Messaging service implementing 256-bit Strong Encryption. I wrote assembly-level implementations of the RSA, RC4, and SHA algorithms, designed a simple and intuitive user interface which hides the complexities of the secure communications protocol, and developed a multi-threaded server system to route the encrypted tcp/ip traffic to its destination, providing an outer layer of encryption to protect the identities of the sender and recipient. I also wrote an automated back-end process to instantly enable a user's "pro version" functionality in the client immediately upon notification of payment from the Paypal server. Currently, X-IM has over 8,000 registered users.

### **Wilson, Hewitt and Associates, Inc.**

*April '92 — March '03*

*Senior Developer*

During my eleven years with Wilson Hewitt, I worked directly with the owner and president to provide custom software solutions to a wide spectrum of clients, as well as developing some innovative technologies for in-house ventures. This is a small representative sample:

#### Facilities Management System

Developed a Facilities Management System from the ground up for the Langhorn Forms Division of Willamette Industries (now part of Weyerhaeuser Company). This included development of 1) an embedded application for handheld RF scanners to track the receipt and consumption of materials on the factory floor, 2) server-based back-end software to facilitate communication between the scanners and the application database, 3) a user application to automate inventory control and reporting, invoices and purchase orders, and 4) an automated scheduling module providing the users with a drag-and-drop interface for scheduling production jobs on the various machinery on the factory floor. This also included an innovative automated scheduling algorithm to determine the optimal ordering and assignment of jobs to machinery. As of my last contact with Langhorn Forms, they have been using this software continuously for ten years, and are holding out against pressure to migrate to the less-functional software standard of their new parent corporation.

## Image Access System

Developed an application for the Philadelphia Water Department to store and retrieve very large scanned images of maps and schematics from their internal FTP server, integrate with their image viewing software, allow editing of all associated image metadata stored on a SQL Server database, and present these functionalities to the user in a simple integrated interface.

## Automated Documentation Project

Wrote an application to automatically document the source code of a very large financial services web application, written entirely in the Forth programming language. Because of the size and complexity of the application, the nature of the language, and the complete lack of documentation, this business-critical application had become completely unmaintainable. I developed a process to parse the code and automatically generate tens of thousands of pages of hyperlinked html documentation. I developed an intranet application to provide for searching and browsing the documentation and the code, providing forward and backward links for all the references and relationships between functions, and also wrote over a hundred qualitative descriptions to further document the most important functions of the application.

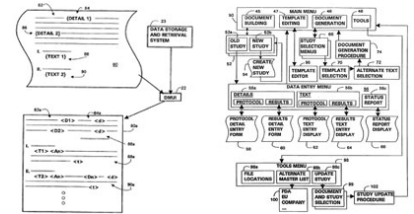
## Corrugated Box System

Developed software for a corrugated box company to allow a sales representative, technician, or engineer to design ad hoc boxes based upon customer-provided parameters, and to calculate the compression strength, weight capacity, stack height, and numerous other properties, as well as a base unit price. I also developed an optimization module, which automatically determined the ideal physical parameters for box construction to meet the customers' requirements at the lowest price. Once a box design was specified, the software generated technical plans for the factory, and displayed a movable 3-D model of the box for the benefit of the customer.

## Software Patents

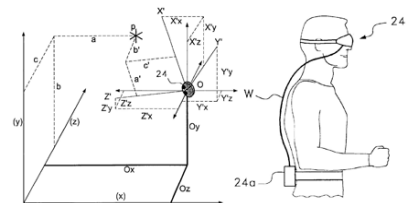
### **Drug Document Production System:** U.S. Patent Numbers 5,734,883; 5,963,967; 6,205,455; 6,505,218

A legal documentation system I developed, which was subsequently patented by the client. The system can generate flexible legal documents that adhere to certain general outlines by means of user-designed templates. The templates are designed by the user to reference annotated boilerplate clauses according to the required parameters (such as the jurisdiction or the type of client), and also to pull in information from a database of drug study results. This implementation was tightly integrated with WordPerfect, which was the standard in the legal profession at the time, providing attorneys and clerical workers with an integrated environment for generating and editing documents and entering study data. This patent was referenced in subsequent patents by Microsoft and Sun Microsystems.



### **Dual Reality System:** U.S. Patent Numbers 6,278,479;; 6,498,618

As an internal project for Wilson Hewitt, I developed a new Augmented Reality system whereby a user with a stereo camera and video headset display could freely move in any environment, with the software determining all changes in his position and orientation solely from the stereo video input from the cameras, without requiring any sort of external detectors. I developed the mathematical equations and software systems for the project, built a preliminary working prototype, and also wrote the patent application. Portions of this development effort were funded by DARPA, and the patent was referenced in subsequent patents by Xerox Corporation and Eastman Kodak Company.



## Education and Certification

Sun Certified Programmer for the Java 2 Platform (SCPJ), Standard Edition 5.0 (CX-310-055)

Bachelor of Science, **Computer Science** — *Alameda College and University*  
Undergraduate Coursework, **Computer & Information Science** — *Temple University*  
Associate of Arts, **Math / Science** — *Bryn Athyn College*

