

Michael Pilone	Address
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Objective: Part-time employment teaching software development and computer related technologies.

Education: B.S., Computer Science, May, 2003
 Virginia Polytechnic Institute and State University (Virginia Tech)
 Blacksburg, VA

Computer Skills:

Hardware:	X86, Apple, SGI, StrongARM
Operating Systems:	WinXP/NT/00, Linux, OS X, UNIX, IRIX, MS-DOS
Languages:	Java, JSP, C++, C, PHP, Pascal, Python, SQL
Software Design:	UML, RUP, Extreme Programming
Published Software:	KNewMail, KGesture, KMail, JRioUtil, Tipper, OnTheGo and FreeTime

Work Experience: Co-Founder and CTO of Zizworks Incorporated
 Established: 2003

- Technology officer researching, recommending and implementing company IT infrastructure including mail, web, and security systems.
- Interact with customers for support and product development.
- Software design and development in JSP and JAVA.

Senior Software Engineer, Naval Research Laboratory,
 Washington, D.C.
 Part-time: 1997 - 2003 Full-time: 2003 - present

- Present software demonstrations and briefings to various levels of enlisted personnel regarding research projects and software products.
- Designed and implemented an object database supporting transparent schema evolution and transaction-less exchanges.
- Designed and implemented Java applications to display GPS data with map overlays to support mission planning and visualization.
- Designed and implemented command and control software in an embedded Linux environment for an unmanned ground vehicle.

Software Engineer, Software Technologies Laboratory,
 Blacksburg, VA. Part-time: August 2000 - 2001

- Implemented a Java based application to correlate and display large amounts of financial data.
- Implemented and supported a Java applet based application to catalog and maintain the company software inventory.

Publications: Cross-platform Development: A Difficult Necessity [NRL: 03/00]
Preferences Pattern: A Generic System [NRL: 04/00]

Honors & Certifications: Eagle Scout, Boy Scouts of America
 Gold Medal in Computer Science, Salesianum School

Conferences: Software Developer's Expo 2000 San Jose, CA 03/00
 Internet World 2001 San Jose, CA 12/01

Supplemental Information

Security Information

Citizenship: United States
Clearance: Held and Active
Organization: Department of Defense / Navy

Detailed Project Descriptions

Employment Related:

Builder: I am currently serving as a senior software engineer for the Builder project. Builder is a 3D visualization tool for mission planning, situational awareness and RF propagation and modeling. Builder is implemented in Java using advanced technologies including a fully plugin based architecture, Java3D/OpenGL for 3D rendering, and XML for data serialization. Builder is currently being deployed through-out the Navy on various vessels.

GCS: Designed and implemented command and control software for an unmanned ground vehicle Ground Control Station. The software was implemented in an embedded Linux environment running on the Intel StrongARM processor. The software read commands from a USB joystick held by the operator and relayed the commands through a wireless modem to the vehicle. The vehicle relayed live video and other sensor data through a UHF downstream link back to the GCS.

Vortex: Designed and began implementing an object database which supports transparent schema evolution and transaction less exchanges. Vortex was a challenging project which tested and extended my C++ skills. Vortex was a break through in the field object databases and many of its algorithms implementing transparent schema evolution are referenced in other projects.

MUGS: Designed and implemented a Micro Unmanned Aerial Vehicle Ground Station. This ground station runs on a man wearable computer and uses a touch screen interface to allow the user to plan a flight path for the UAV. The flight path is then sent to the UAV via a RF link. Live video is sent back from the UAV and displayed in real time to the user.

Cross-platform Library (CPL): Implemented a cross-platform library built on the Qt toolkit to allow for C++ applications to be easily compiled on both UNIX and Windows. Troll Tech, the producers of Qt, have requested many of the components of the CPL for inclusion in their next release.

Test Framework: A component of the CPL that provides a cross-platform means of unit testing C++ code. The framework includes a graphical user interface to allow for quick testing and organized displaying of the results.

VPF Map Loader: Designed and implemented a prototype map loader to load and display the NIMA map standard VPF from multiple CDs asynchronously. The map loader supported various zoom levels and real time panning.

InTransit System: Designed and implemented in Java a client/server style application which collects EW contact information and displays the information relative to the user's current position. The application could also disseminate information to other users of the system via client/server architecture over encrypted military radios.

Plant Management and Planning Tool (PMPT): Designed and implemented a tool for managing large amounts of financial and physical inventory data. The tool used an in-memory SQL database for data storage and report generation. Written purely in Java, the tool was distributed to clients in a 'run from CD' format.

PHPWebOffice: Designed and implemented an inter-office communication product designed to serve as a company intranet. The software was written in PHP and was delivered via a web server. Using a framework/component model, the product could be extended and adapted to fit the situation. Designed to be flexible, PHPWebOffice supported both MySQL and PostgreSQL database backends.

System Administration: Install and administer multiple Linux/Windows machines, including:

- Setting up and maintaining IP masquerades (NAT)
- Firewalls
- DNS
- Apache web servers
- PostgreSQL and MySQL databases
- FTP and Telnet hosts
- Samba Interconnectivity
- Linux Software Raid
- User Administration
- Logical Volume Management (LVM)
- Postfix / Courier IMAP
- Tomcat

Personal Projects:

KNewMail: Designed and implemented a free graphical application to check multiple email servers for pending mail and display the resulting mail headers. Supported Pop3, IMAP and flat file protocols. KNewMail is freely available on the web as an application for the K Desktop Environment and is currently included in the SuSE, RedHat, Mandrake and Caldera Linux distributions.

KGesture: Designed and implemented a free application which watches mouse movements on the desktop and recognizes prerecorded gestures. The gestures can then be attached to commands, allowing a mouse oriented user to control many aspects of the desktop environment simply by moving the mouse. KGesture is freely available on the web as an application for the K Desktop Environment.

Qtopia Applications: Implemented many applications for the Qtopia PDA environment produced by TrollTech. The applications include:

Tipper, a simple tip calculator

On The Go, a remote backup and restore application

Free Time, a time logging system supporting multiple tasks and projects

The applications are freely available on the web and run on a x86 platform as well as

the StrongARM based platforms found in most modern PDAs, such as the Sharp Zaurus.

MServGUI: Designed and implemented a graphical user interface to James Ponder's MServ (Music SERVer) application. MServGUI is a cross platform application that allows any machine to connect to and control the music server with a simple point and click interface. The application has become very popular in offices to allow the employees to queue the songs they want to hear next, much like a digital jukebox.

KDE & KMail: Contributed to the development of the K Desktop Environment (KDE). KDE is a freely available desktop environment for XWindows and it is the most popular graphical environment among Linux users. Most important of these contributions were to KMail; the email application currently bundled in the KDE packages. KMail is a Netscape Messenger style application that supports SSH tunneling, multiple email accounts, new mail notification and all other standard features. KDE is currently distributed on the SuSE, RedHat, Mandrake, Corel, Caldera and more Linux distributions. SuSE, Corel, Caldera and Mandrake install KDE as the default graphical interface.

PHP/HTML/MySQL: Designed and implemented an online DVD registration service for my colleagues. The site provided a dynamic HTML interface and was powered by PHP with a MySQL database as the backend. I also implemented a Knowledge Base & Developer Network for open source projects, including KDE and Gnome. The site provided developers a place to post articles and commentary and it will be a central point for news. The site also acted as a portal, gathering headlines from over 30 different news organizations on the Internet and displaying the information in a user configurable manner.