

# Timothy J. Blackman

107 Eastern Ave., Arlington, MA 02476-7602

(781) 646-6119

[Tim.Blackman@gmail.com](mailto:Tim.Blackman@gmail.com)

## Objective

A position developing interesting software using my distributed computing and database background.

## Work Experience

### **Staff Engineer, VMware, Cambridge, MA (5/2010 - Present)**

Engineer working on the [vSphere Storage Appliance](#) (VSA) team developing the first release of a clustered file system to support movement and high availability of virtual machines. Designed and implemented a versioning facility for Java serialization of persistent data structures, as well as other backend features, to support upgrade procedures. Pitched in on bug fixing and minor features for the business logic implementation and infrastructure.

### **Staff Engineer, Sun Microsystems Laboratories, Burlington, MA (9/2004 - 1/2010)**

Lead engineer for [Project Darkstar](#), a software infrastructure for simplifying the development and operation of massively scalable online games and virtual worlds. Invented a novel [write-caching scheme](#) for transactional data storage that takes advantage of reduced durability to achieve horizontal scaling with low latency for access patterns involving 50% writes. Also designed, implemented, and tested the data storage components, which are built using Berkeley DB. Helped guide technical work by the rest of the team and the open source community.

Researcher for [Project Neuromancer](#), a distributed infrastructure for large-scale telemetry networks, with specific application to medical sensors. Responsible for the Jini service implementations of several system components, and for utilities to simplify the deployment of Jini applications.

### **Staff Engineer, BEA Systems, Inc., Burlington, MA (4/2004 - 9/2004)**

Worked on the administrative console for the 9.0 release of WebLogic Server, an application server.

### **Staff Engineer, Sun Microsystems, Inc., Burlington, MA (10/1999 - 4/2004)**

Worked on the creation of a pluggable security infrastructure for the 2.0 release of [Jini](#), a dynamic distributed computing facility written in Java. Responsible for an [integrity preserving URL scheme](#) based on message digests, the SSL transport for a new pluggable RMI implementation, facilities for specifying security configurations at deployment time, modifications to the Jini lease renewal service to support the new security scheme, and working with the rest of the team and with members of the Jini community regarding the design and use of the new security facilities.

### **Principal Engineer, Object Design, Inc. (now Progress Software), Burlington, MA (7/1992 - 9/1999)**

Designed, implemented, tested, and supported, through several releases, the Java interface to ObjectStore, an object-oriented database, coded in Java and C++, and its companion product, PSE Pro for Java, written entirely in Java. Responsible for the storage system interface, persistent object layout, persistent B-tree, query evaluation facility, and conversion of query expressions to Java byte code.

Reimplemented the persistent pointer relocation subsystem of the C++ version of ObjectStore to support hardware architectures with different byte orders. Also designed further modifications to

support relocation of objects stored in different C++ compiler layouts.

**Senior CAD Engineer, Analog Devices, Inc., Wilmington, MA (6/1989 - 5/1992)**

Responsible for GUI, portability, and system performance for an in-house integrated electronic CAD framework for mixed analog/digital circuit design, implemented in Lisp and CLOS.

**Project Leader, Silc Technologies, Inc., Burlington, MA (11/1986 - 6/1989)**

One of several founders working to commercialize a design synthesis tool developed at GTE Labs.

**Member of Technical Staff, GTE Laboratories, Inc., Waltham, MA (7/1983 - 11/1986)**

Responsible for the language parser, functional simulator, and logic synthesizer, and helped to specify the hardware description language, for a design synthesis tool for creating electronic circuit layouts from high-level language descriptions, targeted to telecommunications circuits, and written in Lisp and Flavors.

## Skills

**Programming languages**

Java (including RMI, serialization, security, multi-threading, and generics), C++, shell, Perl, Lisp.

**Operating systems**

Linux, Mac OS X, Solaris, Symbolics, VMS, BSD Unix.

**Tools**

Emacs, Ant, Maven, Subversion, Perforce, Checkstyle, FindBugs, Clearcase.

## Presentations and Publications

*Write Caching with Reduced Durability*, T. Blackman, 13th International Workshop on High Performance Transaction Systems (HPTS), October 2009

*Scalable Data Storage in Project Darkstar*, T. Blackman and J. Waldo, Sun Labs Technical Report TR-2009-187, October 2009

*Project Neuromancer*, J. Waldo, T. Blackman, J. Loizeaux, R. Sproull, M. Warres, and A. Wollrath, Sun Labs Technical Report TR-2007-167, May 2007

*Jini in a JAR*, T. Blackman, 9th Jini Community Meeting, October 2005

*Implementing and Deploying Secure Clients and Services with the Jini Network Technology Security Programming Model*, T. Blackman, B.S. Andersen, and D. Jiang, Sun JavaOne conference, Technical Session 1313, June 2003

*The Silc Silicon Compiler: Language and Features*, T. Blackman, J. Fox, and C. Rosebrugh, Proceedings of the 22nd ACM/IEEE conference on Design automation, p. 232-237, June 1985

## Patents

*Systems and methods for providing object integrity and dynamic permission grants*, R. Scheifler, T. Blackman, and M. Warres, granted July 21, 2009

*Dependency-based grouping to establish class identity*, T. Blackman and J. Waldo, granted November 16,

2010

*Method and apparatus for generating and using location-independent distributed object references*, J. Waldo, T. Blackman, D. Ellard, R. Sproull, J. Loizeaux, and M. Warres, filed September 27, 2007

*Distributed Database Write Caching With Limited Durability*, T. Blackman, filed June 2, 2009

## **Education**

### **Brandeis University, Waltham, MA**

B.A. in Math and Music, *summa cum laude* (1983)

## **Other Interests**

Jazz piano, Hwa Yu T'ai Chi