

## Technical Expertise

C# & VB.Net  
ASP.Net  
Java & JavaScript  
C++  
OOD / OOP  
UI Design  
Windows 2000 & XP  
Technical Documentation  
Test Automation

## Organizational Expertise

Team Leadership  
Project Management  
Consensus Building  
Mentoring  
Individual Contributor  
Initiative / Self-Starter  
Multitasking & Meeting Deadlines  
Software Development Methodology  
Excellent Communicator

## Additional Skills

SQL  
Microsoft SQL Server  
HTML, CSS, XML  
UML  
Client / Server  
RPC  
TCP/IP (Sockets)  
Macintosh OS 9 & 10

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## Selected Softography

### HymnScores.com

This web application delivers customized musical scores from an SQL database of 4500 hymn tunes and 6500 lyric sets, allowing arbitrary combinations of words & music, key transposition, and page formatting. Technologies include C#, ASP.Net, MS SQL, XML, MusicXML, MIDI. 22k lines of C# code, plus another 39k lines of auto-generated C# code. Personally responsible for all aspects of the project. Currently in beta test.

### XML Code Generator

This development tool generates source code for the C# or VB.Net classes that correspond to XML entities, providing a more typesafe and extensible set of business classes than can be obtained by direct use of DOM. The specification file that defines the XML structure can also be used to customize an XML editor.

### Database Code Generator

This development tool generates source code for the C# or VB.Net classes that represent database tables and records, along with SQL stored procedures to support database access methods. Enables rapid development of database applications.

Personally responsible for conception, design, implementation, documentation, and support. 31k lines of VB.Net code

### Film Cut List Tool

A major component of Avid Technology's Media Composer family of professional video editing software, the Film Cut List Tool generates instructions for (human) film negative cutters. Film cutting is a destructive process, so the generated cut lists must be absolutely accurate and correct.

Work included customer collaboration, architecture, UI design, design of complex data analysis algorithms, implementation, and testing.

Personally responsible for writing & maintaining 75k lines of cross-platform C++ code (Windows & Macintosh).

### Satin

A second-generation test automation system for Avid Technology's Media Composer family of professional video editing software. 60k lines of Java, with some C++ in the application under test. Features included:

- o automated testing of a large & complex GUI application
  - o remote testing of multiple target machines over TCP/IP using custom OO/RPC mechanism
  - o multi-platform support: Windows, Macintosh OS 9, Macintosh OS 10 (Unix)
  - o automatic execution of tests against nightly builds
  - o database of test results
  - o complete documentation of testing API and test scripts
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## Music Database

A networked Windows database application for organizing music files, including audio, MIDI, scores, and lyrics.

- Database objects include File, Track, Album, Piece, Person (artist), Group, Playlist, Category.
- Central database and audio files are available to any machine on a LAN.
- Static or dynamically-generated play lists, with various kinds of randomization.
- Remote control of players on other machines.
- Unlimited user-definable categories.
- Rich UI optimizes common tasks; ubiquitous drag-and-drop for establishing relationships.

Personally responsible for conception, design, implementation, documentation, and support. 50k lines of hand-coded C# and VB.Net code, with another 40k lines of generated VB.Net and SQL code.

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## Professional History

### WSI, Inc., Andover, MA

April 2007 – date

#### Principal Software Toolsmith Engineer

- Architected, designed, implemented, and maintained a test automation system in C# for a large real-time multimedia application written in C# and C++. Components included:
  - C# testing API
  - interactive and batch-mode test harnesses
  - XML schema for test logs
  - automatic scheduled test execution
  - complete documentation
  - SQL database containing builds, automated test results, performance data, manual test results, and test schedules
  - web site for controlling and monitoring test automation, and reporting test results
- Designed, implemented and maintained a variety of tools to aid both development and QA, including:
  - a WinForms app for viewing and analyzing application log data, featuring a zoomable multi-track timeline
  - a configurable system performance monitor, optimized for the application under test
- Collaborated with developers on various improvements to the C++/C# Applications under development, including:
  - remote control capability, tied into both WinForms and WPF GUIs
  - standardized logging of application errors and debugging events

### Allscripts Inc., Burlington, VT

2006-2007

- Designed and implemented components of a medical database system.
- Designed and implemented a set of standard UI controls for use throughout a large WinForms application.
- Technologies included C#, Visual Studio 2005 (.Net 2.0), Infragistics NetAdvantage.

### Green Mountain Logic, Montpelier, VT

2005-2006

- Maintained & enhanced a distributed medical results management system.
- Technologies included C#, VB.Net, C++, VB6, Java, SQL, COM+, InstallShield, multithreading.

### Retail Vision Inc., Middlebury VT

2003-2005

- Designed & implemented components of a database application for a magazine distribution business.
  - Work included front end (UI), back end, SQL stored procedures, and automated unit tests.
  - Designed & implemented Database Code Generator (see Softography).
  - Technologies included VB .Net, C# .Net, SQL, remote objects, multithreading.
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## **Avid Technology, Tewksbury MA**

**1991-2002**

**Satin** (2nd-generation test automation system; see Softography)

- Provided technical leadership and mentoring to a team of 8-10 engineers.
- Evaluated commercial Java courses and selected one for team training.

**Feature Tree Manager** (system for tracking test coverage by product feature)

- Designed, implemented and documented an MFC C++ application for entering and viewing test results, organized by product feature using a combination of hierarchical (tree) and table views. Used Microsoft SQL database for storing test results.
- Patent application initiated.

### **Test Automation**

- Architected Avid's first test automation system using Segue's QA Partner (Silk) on the Macintosh.
- Established and maintained standards for software development.
- Led and mentored automation team that grew to 10 people.
- Documented all test automation API's on intranet web site. Wrote interactive web-based training curriculum for QAP and in-house automation API's.
- Ported test automation system from Mac to Windows NT; maintained cross-platform automation code.
- Helped design SQL database for storing automated test results.
- Oversaw test automation effort through a dozen major product releases.

## **Wang Laboratories, Lowell MA**

**1980-1991**

- Led a project team of 6 people in the development of a collection of several dozen general-purpose C libraries for supporting the development of portable applications on a variety of platforms, including MS-DOS, OS/2, UNIX, Wang VS.
- Managed all aspects of the entire software lifecycle, including: requirements analysis, design, implementation, QA, performance analysis, documentation, maintenance, source and release control.
- Coordinated development of C libraries company-wide; instituted corporate standards for C libraries.
- Awarded highest rating – “outstanding” – on several performance reviews.

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## **Education**

Yale University – B.S. in Computer Science

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## **Quotes from Performance Reviews**

“Ed is a sponge for new technology.”

“Ed frequently shows the initiative to pursue objectives that have not been specifically assigned to him. When he sees something that needs to be done or improved, he looks to make it happen.”

“Ed manages a very large number of tasks simultaneously. He multitasks well, giving each task its appropriate priority, and bouncing around between tasks in a very effective manner.”

“He is highly respected within the group, and is frequently sought out for his opinions and advice. He takes time out from the many tasks that he has, to help others whenever they ask. He takes the time to thoroughly answer their questions, and to explain his reasoning, so that they may learn from experience.”