

## Philip Borenstein

pborenstein.com  
pborenstein@gmail.com

### EXPERIENCE

*April 1996–  
November 2008*

#### **Cognex Corporation**

##### **Principal Technical Writer**

During the 12 years that I worked in Cognex's Technical Publications department, the company evolved and changed from a company that provided vision software to support its hardware offerings to a company that focused on software and low-cost sensors. As the company's products changed, so did its technical documentation needs. Our staff dwindled from over a dozen writers to three, yet we were able to produce quality technical documentation on time.

I wrote API documentation for two major vision class libraries. The libraries had C++, C#, and Visual Basic interfaces. In addition to describing functionality, I wrote sample code in all three languages. I also wrote many of the tools that we used to generate the documentation in several formats.

CVL (Cognex Vision Library) is a very large C++ class library made up of nearly 600 classes designed initially for OEM semiconductor inspection applications. My work on this library included:

- ◆ Documenting most of the early classes for various vision tools, image acquisition, and image display.
- ◆ Creating a tool to parse C++ header files to extract function signatures and generate ready-to-use FrameMaker templates.
- ◆ Designing the layout and FrameMaker templates for the printed documentation. This layout is still used today to generate the PDF files.
- ◆ Writing a tool to help discover instances where developers had added new members to classes to make sure the documentation was up to date.

VisionPro is Cognex's flagship general purpose vision software product. It provides both an interactive development environment as well as a rich .NET-based vision library. My work on this product included:

- ◆ Documenting the API for most of the classes, including creating examples and code snippets for most of the methods.
- ◆ Writing conceptual documentation and how-to guides to help customers learn how to use and combine parts of the library for both API and interactive users.
- ◆ VisionPro was originally a COM product. With other members of the team, I wrote a set of tools that used reflection to generate base documentation from COM-based libraries. When VisionPro moved to the .NET architecture, I wrote tools to generate a new .NET version of the documentation and then keeping both the COM and .NET versions in sync. (The COM version was eventually dropped.)
- ◆ The COM VisionPro documentation source existed as a set of over 20,000 XML files. We wrote custom tools to generate CHMs for the VisionPro documentation. For the move to .NET, I adapted NDoc, an open source documentation generator, to use our legacy XML files as well as new C#-generated documentation XML files. We wrote tools to generate HTML, CHM, and HxS versions of the documentation.
- ◆ Over time I refined our build process so that we were able to build complete documentation sets for review in under an hour instead of three or four hours.

- ◆ With the discontinuation of work on NDoc, I started work on adapting Microsoft's Sandcastle documentation generator to work with our system.

In addition to working on documentation for Cognex's vision software class libraries, I also wrote and maintained several tools used by both projects.

- ◆ I wrote an XML-based application to maintain releases notes for both VisionPro and CVL and generate HTML lists for inclusion in the documentation set or for internal use. The application included links to the bug database, noted when a bug appeared and when it was closed, and could be used to generate historical versions of the release notes.
- ◆ I maintained a camera database that started as a simple table and later became an XML-based file similar to the release notes database. This became the single place where there was a historical record of which cameras were supported in which release of each software product. I taught myself MS Access and SQL to reimplement this application as an Access database and transferred responsibility of the database to engineering. This database is still in use, and is now used by marketing to generate a list of compatible cameras on the Cognex web site.

*September 1992–  
April 1996*

### **Documentation Consultant**

Designed and wrote documentation for several Macintosh software companies. Clients include:

- |   |   |   |
|---|---|---|
| ◆ Metrowerks<br>Cookbook for PowerPlant,<br>CodeWarrior's application<br>framework        | ◆ Bare Bones Software<br>Apple Guide help and<br>printed documentation<br>for Macintosh text editor | ◆ Pacer Software<br>Documentation for<br>communications software                                    |
| ◆ Component Software<br>Class library documentation for<br>OOP development<br>environment | ◆ BBN<br>Documentation for<br>Internet server admin-<br>istration software                          | ◆ Charles River Analytics<br>Manual for intelligent agent<br>software for novice Macintosh<br>users |

My technical expertise allows me to make informed suggestions about human interfaces and the functionality of the products I document. My broad experience in software development allows me to work quickly and well with management, engineering, and marketing departments.

*March 1987–  
June 1992*

### **Symantec Corporation**

In five years I contributed to virtually every area of software development through four versions of THINK C, three versions of THINK Pascal, and two versions of THINK Reference, then the best-selling development tools for Macintosh computers. I held positions as Product Manager, Documentation Manager, Technical Support Manager, Quality Assurance Manager, and Technical Writer. I was usually in charge of at least two departments at the same time.

#### **Product Manager (3/90 – 6/92)**

- ◆ Responsible for all language products for the Macintosh: THINK C, THINK Pascal, and THINK Reference.
- ◆ Wrote initial business plans that included product definition, target customers, product positioning, and feature specification.
- ◆ Tracked development, set schedules, and made trade-offs to ensure on-time delivery of the products.
- ◆ Coordinated with other groups (manufacturing, international, marketing) so entire product team knew exactly where projects stood at all times.

**Documentation Manager (3/89 – 6/92)**

- ◆ Responsible for all aspects of documentation: planning, scheduling, designing, and writing.
- ◆ Wrote first manual for the THINK Class Library, an object-oriented application framework. This manual included a highly praised introduction to object-oriented programming as well as an easy-to-follow tutorial.
- ◆ Earlier, as a Technical Writer, solely responsible for the THINK C and THINK Pascal manuals. Wrote most of the tutorials (programs and text) used in the manuals.

**Technical Support Manager (10/90 – 11/91)**

- ◆ Managed three support engineers who were suffering from burnout and frustrated with high call volume.
- ◆ Improved communication and cooperation among the support engineers and kept them informed on various projects throughout the division and the company.
- ◆ Shifted emphasis from call throughput to call quality and reduced customer complaints by instituting guaranteed callbacks by the end of the day.
- ◆ Integrated Zortech's four technical support engineers during the Zortech acquisition (9/91) into Symantec's support department. Trained new support manager.

**Quality Assurance Manager (9/89 – 10/90)**

- ◆ Supervised two QA technicians.
- ◆ Set up improved bug-tracking system that made it easier for engineers to get information on problem reports.
- ◆ To ensure immediate feedback between QA and Development at the end of a product cycle, instituted a round of daily progress meetings.
- ◆ Moved responsibility for alpha and beta test program from product management to the QA department to make testing more effective without compromising alpha and beta testing as a useful marketing tool.

*August 1985 –  
February 1987*

**Applied Expert Systems, Inc.**

**Software Engineer**

Responsible for maintaining several system modules of financial planning expert system software including: spreadsheet, backup/restore system, batch script module, file access modules, product installation and update installation system. Completely redesigned and reimplemented the backup/restore system to improve reliability and flexibility. Served as System Group liaison to Customer Support Group.

Wrote and presented a course on the Xerox Interlisp Environment for non-Interlisp users, including user's manual, and a course on "Lisp Literacy" to make interaction between the Systems Group and Customer Support more effective.

*August 1984 –  
July 1985*

**Warren E. Collins, Inc.**

**Contract Programmer**

Designed and wrote several modules of a large Pulmonary Function Testing system for the IBM PC. Taught C to in-house programmers. Resolved design issues. Established guidelines for software version control and system generation. Maintained and documented project software library.

*February 1983 –  
July 1984*

**Verbex Corp.**

**Software Engineer**

Maintained and enhanced object-oriented editors of Speech Application Development System.  
Designed user interface for a screen-oriented symbolic debugger for TMS320 signal processing chip.  
Designed and implemented device-independent screen and keyboard modules and macro preprocessor for in-house language.

*June 1982 –  
February 1983*

**Computervision Corp.**

**Programmer**

Maintained and enhanced line editor, file manager, and software development tools. Implemented ANSI tape support.

**EDUCATION**

**Brandeis University, 1982**

BA with High Honors in Computer Science. BA honors thesis on text manipulation and representation of a hypertext system.