

William W. Provost

consultant in software design and development

SEL ECT E D CONS U LTING EXPERIENCE

Tidewater Technology Group, 2005 – 2006 Chesapeake, Virginia

Training client's staff in XML, Web services, and SAML. Designed WSDL and built SOAP/SAML Web services; developed Java applets to enable secure chatting using proprietary SSO model supported by these services.

Optram, 2004 – 2005 Maynard, Massachusetts Consulted on migration of existing application to a multitier architecture using Java 5.0 and J2EE 1.4. Led design and implementation of the new application, established development environment, retrained development staff.

Siemens Corporate Research, 1998 – 2002 Princeton, New Jersey Trained SCR staff in COM, and consulted on architecture of their first ground-up COM application development. Trained an overlapping development team in Java and J2EE and advised on design issues in that area.

Kepner-Tregoe, 1999 – 2001 Princeton, New Jersey Advised on general enterprise-level software design issues, and helped to redefine specifications for a distributed process support application called *eThink*. Participated in ground-level implementation of initial release. Consulted on evolving architecture into web-hosted multi-tier application based in J2EE technologies. Designed a distributed collaboration model to support real-time teamwork on formalized business processes.

RequestHealth, 1999 Cambridge, Massachusetts Architectural analysis of a distributed, workflow-style healthcare transaction management tool. Assisted with domain modeling; developed the top-level component and layering decompositions for the system; analyzed the product's relationship to relevant CORBA services and designed implementations or adaptations of some of these, including the Workflow facility; implemented a flexible mediator for client interaction with domain objects.

NetGenics, 1998 – 1999 Cleveland, Ohio Technical lead on the development of a CORBA Externalization framework for client's existing object model.

Designed service implementation using a memento-based infrastructure for externalization target classes in both C++ and Java. Built stream library in Java, as well as the target framework for existing Java classes.

America's Health Care Manager, 1997 Westborough, Massachusetts Participated in architecture of distributed, large-scale healthcare management and delivery system using CORBA, DCOM and ODBMS. Designed and developed initial object model, analyzed interoperability issues, especially between CORBA and DCOM, use of the C++ STL, and integration between CORBA and ODBMS products.

Riverton Software Corporation, 1996 Cambridge, Massachusetts Designed and prototyped the Java code generator for Riverton's HOW, an object-oriented application modeling system for business and MIS development. Generated applet classes model windows as business forms in a web browser, using JDBC to connect to live data instances.

Nabnasset Corporation, 1995 – 1996 Acton, Massachusetts Designed and developed a low-level communications tool to allow client applications to share data on Windows 3.1/NT in ways not available in solutions such as DDE or COM. Visual C++ 2.2 for C, C++ and VB clients.

The Clarity Group, Inc., 1993 – 1995 North Andover, Massachusetts Principal consultant in OOAD, primarily C++ for Windows NT/3.1 with a focus on COM. Projects included a client-server financial analysis tool for State Street Bank and the SnakeEyes SNMP library for Cayman Systems.

PUBLISHED WORKS

XML and Java Courseware, 1999 – present *Capstone Courseware*

I manage a curriculum of courseware on Java and XML topics, and have written many of the core materials, including courses in Java Programming, Servlets, JSP, JDBC, EJB, Web Services, Java/XML Programming, XML, XSLT, XML Schema, and Design Patterns.

Web Services Articles, June – October, 2003 *O'Reilly Network / XML.com*

Series of technical articles on Web services: a soapbox piece arguing for WSDL as the source for service interface and type definitions; UML for Web services, integrating native language, XML Schema, and WSDL into coherent service designs; interoperability vs. integration vs. convention; using XSLT to integrate disparate XML- or SOAP-based services via intermediary components.

"XML Schema Clinic", April – December, 2002 *O'Reilly Network / XML.com*

Series of technical articles on XML Schema and other XML validation strategies. Topics in brief: using XPath and XSLT to assert constraints on valid document content; enforcing association cardinality when using keys and keyrefs; UML for XML Schema design; structural patterns in XML; normalizing XML documents.

"Bullfighting Made Easy", April – July, 1995 *Windows Tech Journal*

Series of technical articles on COM/OLE2 topics: sample code from the "RealOLE" class library, also developed by the author; a technique by which OLE automation objects may be inherited; and techniques for creating some unconventional OLE containers by redefining many of the commonly ignored site and container methods.

TRAINING

Independent Instructor, 1996 – present Boston, Massachusetts Teaching classes in Java and J2EE topics, XML, COM, CORBA, and C++. Clients have included Fidelity Investments, Nextel, FNMA, Ericsson Telecommunications, AC Nielsen, Veritas Software, Honeywell Systems, Respironics, Qwest, BellSouth, NSA, DoD, Penske Leasing, EMC, Nextel, Nokia, Eastman Kodak, and MIT.

Sun Microsystems, 1996 – 1998 Chelmsford, Massachusetts Teaching one-week classes including Introduction to Java, Java Application Programming, JavaBeans, Java Foundation Classes, and Distributed Computing with Java (including JDBC, Java RMI, and JavaIDL/CORBA).

Object World East, 1997 Boston, Massachusetts Presented a seminar on the role of JDBC in modeling relational databases as objects, through an adapter and framework that can capture the persistence semantics of objects as they map to RDB schema.

EDUCATION

Harvard College, 1988. A.B. in Biophysics. Graduated *cum laude*. Cambridge,

Massachusetts REFERENCES AVAILABLE ON REQUEST