

Robert V. Binder

Mobile 312 404 5341
Email rvbinder@gmail.com
Twitter [@rvbinder](https://twitter.com/rvbinder)
LinkedIn www.linkedin.com/in/rvbinder
SlideShare www.slideshare.net/robertvbinder
Executive Profile robertvbinder.com

C-LEVEL ~ INFORMATION TECHNOLOGY

Serial Entrepreneur, High Assurance Thought-leader, System and Process Architect

Rare combination of business and technical skills—promoter, dealmaker, closer, manager, financial analyst; master system architect and solution innovator. Widely published, a sought-after speaker, and globally recognized as a software engineering thought leader. Intuitively recognizes disruptive opportunities and big solutions. Broad and deep grasp of value, architecture, and implementation of large, complex systems. Engaging and flexible communicator who sells business plans to investors, shares technical nuances with academics, delivers practical techniques to programmers, and develops strategy and tactics with senior management. Proven effectiveness in many verticals—financial, healthcare, IT, defense, energy, others—and all major IT stacks—mobile, cloud, open, proprietary.

CORE SKILLS

- Business planning, modeling, forecasting
- Multi-dimensional technology marketing
- Service project proposals, sales, and delivery
- Budget management, cost controls
- \$MM contract negotiations, sales
- Envisioning total innovative solutions
- Operations studies, gap analysis/correction
- Cloud/mobile systems architecture
- Advanced automated testing solutions
- Performance and quality management

EDUCATION

MS, Electrical Engineering and Computer Science — *University of Illinois at Chicago*
MBA, Management Science and Finance — *University of Chicago, Booth School of Business*
BA, Political Science — *University of Chicago, The College*

PORTFOLIO

System Verification Associates LLC, Chicago

2009 to Present

PRESIDENT

Deliver best-of-breed consultation services for mission-critical system assurance. Quickly established wins for marquee clients facing high-stakes regulatory challenges. Multi-national client base spans leading independent software vendors, manufacturers, and government agencies.

- Conducted in-depth process assessment for a leading provider of integrated healthcare information technology seeking to achieve world class results in quality, development practices, and customer value. Reviewed Agile and phased development practices of hundreds of managers, architects, and developers. Evaluated system architecture comprised of client/server, Oracle DBMS with thousands of tables, Hadoop/MapReduce clusters, multi-tier REST/JSON servers, and dozens of iPhone and Android apps. Assessed practices, development environment, a complex devops tool chain, and data center using TMMi and related criteria. Developed 65 detailed recommendations achieving a net cost-benefit of \$5 million.
- At the request of Microsoft's Principal SDET for its Open Protocols Initiative (OPI), recruited and led a team of senior consultants to assure acceptance of deliverables required by a US Federal Court Order. Reviewed hundreds of OPI specifications and model-based test artifacts, pinpointing many improvements. Served as process architect for a global contractor team located in China, India, and the Americas. Performed gap analysis using ISO 17025 (Test Lab quality standard).
- At the request of a leading provider of US FDA-regulated software responding to an FDA warning, led the verification and validation transformation project. Surveyed competitors to establish best practice benchmarks. Assessed development and assurance of six business units with offshore development. Identified FDA class II compliance issues and process improvement opportunities. Delivered detailed recommendations and an action plan to improve processes and prevent future warnings. Facilitated senior management buy-in and supported plan implementation.

Robert V. Binder

Internet Assurance Lab, University of Illinois at Chicago

2012 to Present

CO-DIRECTOR

Applying protocol verification expertise and coordinating with industrial partners on research and development to improve robustness and usability of network technologies.

X9 D14 Working Group, Quality Management System for Automated Trading

2012 to Present

WORKING GROUP CHAIR

Leader of ASC/X9 process to develop a management system standard for the automated trading industry; liaison to ISO (International Organization for Standardization.) Based on ISO 9000, this standard will define best practices for developers and operators of automated and high frequency trading systems.

Olenick & Associates, Chicago

2012 to 2013

DIRECTOR OF INNOVATION

Ideated and launched a total marketing program for a 225-person IT testing service firm; developed twenty new service offerings. Performed all aspects of consultative selling; managed test automation engagements. Cultivated alliances with startup and market-leading ISVs.

- Established a total marketing program for a fragmented service/market mix with no marketing strategy, staff, or resources. Given a budget under \$10,000, designed and led development of integrated marketing platform; launched social media presence. Developed “Deployment Assured” re-branding strategy; defined roadmap and process, managed multiple campaigns. Aligned ISV partnerships with campaigns. Established collateral templates; wrote three white papers and many data sheets. Personally designed and implemented an entirely new web site using WordPress Multi-Site; organized team of content contributors. Established marketing management by analytics.
- Developed twenty innovative service offerings, including “Assured Windows Migration” and advanced assurance solutions for cloud, mobile, and devops.

mVerify Corporation, Chicago

2001 to 2009

CEO

Founded a software startup to bring a unique solution for end-to-end mobile app testing to market. Pitched over 100 venture capital firms; raised over \$3 million from agencies and angel investors. Negotiated shrewdly for all sales, development, and investment contracts. Identified and cultivated relations with key channel partners and suppliers. Sourced, established compensation models, and managed all technical, marketing, and operational staff. Defined and evolved product architecture and then followed through leading all design, programming, and testing. Recruited corporate board, chaired meetings, and prepared quarterly reports. Managed counsel for all IP and employment matters.

- Developed a mobile app testing prototype that [premiered at DEMO](#), proving innovation leadership. Proposed the [Advanced Mobile Application Testing Environment to the US National Institute of Standards and Technology’s Advanced Technology Program](#). Was one of 40 selected from 472 submissions to receive a \$1.9M award for R&D. Led two-year development to successful completion with a demonstration at the International Conference on Software Engineering, May 2005.
- System architect for [MTS, mVerify’s commercial testing product](#), supporting Windows Mobile and all leading server stacks. Established roadmap then led high-assurance agile development, marketing, and sales of five releases.
- Headed the full scope of business development functions. Prospected and pitched Venture Capital firms from Sand Hill Road to Route 128, preparing all supporting business plans and decks. Raised \$1.5M from non-institutional investors. Developed bottom-up business forecast generating multi-year financial statements. Personally conducted hundreds of sales presentations and demos. Continuously monitored competitive status of all players/products in the test automation space. Defined “Mobile Testing Nightmare” and “A Million Users in a Box” branding strategy; selected and supervised several agencies to develop multi-media/viral campaigns.
- Built and sustained relations in vertical markets including the DoD, wireless infrastructure, network equipment, handheld devices, large and small independent software vendors, and global IT service providers.
- Prevailed in a six year application process with the US Patent Office.

Robert V. Binder

RBSC Corporation, Chicago

1985 to 2001

PRESIDENT

Sold, planned, and headed hundreds of international software engineering service engagements focused on synergy of tools, methodologies, and process. Developed 65 days of instructor-led seminars; managed globally dispersed instructors to deliver training to thousands of developers in North America, Europe, and Asia. Established an automated testing practice delivering 10-year run of assurance solutions for “failure is not an option” clients in aerospace, financial markets, and regulated medical devices.

- Approached by the Chicago Board Options Exchange (CBOE) to conduct all integration and system testing of CBOE Direct—a “screen-based” trading system for the world’s leading options exchange. Pioneered a unique model-based testing system; established a multi-platform real-time test environment. This four-year engagement resulted in zero-failure production releases and facilitated integration of new derivative products with other exchanges.
- Selected by Exxon Production Research to design, implement, and rollout an integrated tool suite to support a complete re-write of its geological simulation and visualization system running on a supercomputer network.
- Lent critical insight to the management team at Pansophic Systems (now Computer Associates) as they redeveloped and repositioned their ERP for manufacturing product. Created a software process and integrated tool suite product to slash time to market and trounce the competition with agile feature development.

Earlier roles include Application Programmer, Account Manager, and Project Manager. Honed ability to develop systems for a wide range of applications, using cost effective software engineering techniques for high quality. Perfect record for on time, in-budget completion of complex multi-year software projects with fixed-price contracts.

INDUSTRY LEADERSHIP

Conference Co-Chair: 2016 IEEE International Conference on Software Testing (ICST), 2004 IEEE International Symposium on Software Reliability Engineering (ISSRE)

Conference Keynote and Presenter: WOPR-20, MBTUC, CREST, ISSTA, Juniper Ignite, ISSRE, AMOST, ETAPS, Google TAC, Chicago SPIN, TestComm, Software-QS-Tag, QuoMBaT, STAR, Quality Week, ROOTS, TOOLS, CQAA, PNSQC

Editorial Board: *Journal of Software Testing, Verification, and Review*

Technical Advisory Board: *Agitar Software*

Working Group Member: IEEE 1633, Recommended Practice on Software Reliability

Signatory: *Software Engineering and Method and Theory group (SEMAT)*

Senior Member: *Institute of Electrical and Electronic Engineers (IEEE)*

Certified Software Development Professional: *IEEE CSDP*

Lead Judge: *IEEEExtreme Programming Competition*

Program Committee Member: 2011 MBT User Conference, ICST '08, AMOST '06 to '11, and OOPSLA '01

Industry Track Co-Chair: *ICST '09*

Founder and 5-term President: *Structured Techniques Association*

PATENTS

[US Patent 7,339,891: Method and System for Evaluating Wireless Applications](#)

US Patent Pending: System and Method For Distributed Certification Testing

PUBLICATIONS

Books

- [Testing Object-Oriented Systems: Models, Patterns, and Tools](#). Addison-Wesley, 1999. Recognized as a definitive reference, this 1,024 page book has sold over 11,000 copies, been translated to Polish and Chinese, and was recently re-released in paperback. It is the first and remains the only book about test design and test oracle patterns. It provides a practical yet complete explanation of state-based testing. Examples in Java, C++, Ada 95, Objective-C, Eiffel, and Smalltalk. Recommended study reference for the IEEE CSDP (Certified Software Development Professional) exam. Textbook for dozens of university courses.
- [Application Debugging](#). Prentice-Hall, 1985. Recognized as a definitive reference for IBM mainframe programmers. Shows how to analyze runtime errors for programs written in Cobol, Assembly, PL/I, and Fortran. Featured selection of the Library of Computer and Information Sciences Book Club.

Robert V. Binder

Influential Blog about software development technology. Selected posts:

- [How a Big Ball of Mud becomes a Black Hole: Why Software Architecture and Process Matters](#)
- [Who Spun the Web?](#)
- [VCs Say the Darndest Things](#)

Fifty-eight articles in leading professional and refereed journals, cited over 2,200 times. Selected titles:

- [Microsoft's Protocol Documentation Program: Interoperability Testing at Scale.](#) *ACM Queue*
- [Model-based Testing Update.](#) *IEEE Reliability Society 2010 Annual Technical Report.*
- [The Percolation Pattern,](#) *C++ Report.*
- Monthly column 1995 to 1998, *Object Magazine.*
- [Can a Manufacturing Quality Model Work for Software?](#) *IEEE Software.*
- [Testing Object-Oriented Programs: a Survey.](#) *Journal of Software Testing, Verification and Reviews.* This comprehensive survey of the state of the art was serialized using all pages of two issues of an archival journal.
- [Design for Testability with Object-Oriented Systems.](#) *Communications of the ACM.*
- [KB/RMS: An Intelligent Assistant for Requirement Definition,](#) *International Journal of Artificial Intelligence Tools.*

Courseware

- Designed and developed Massive Open Online Course (MOOC) [How to Test Mobile Apps, hosted at Udemy.com](#) the world's largest destination for online courses.
- Developed 3-day instructor-led course, *Testing Object-oriented Software*, offered to 40,000 Lucent (Bell Labs) software developers through its Software Engineering Center of Excellence.
- Designed and developed over sixty days of instructor-led training in software engineering and management.

Developed and released two open source projects

- [Test Automation ROI Calculator.](#) Developed and released tool to define and analyze cost/benefit of test automation (GPL). Accompanying white paper explains usage with detailed case study.
- [Reliability Demo Chart.](#) Developed and released tool to make release decisions using reliability analysis (GPL). Presented application case study at ISSRE 2009.

TECHNOLOGY PORTFOLIO

Mastered and applied a wide range of technology stacks to design, develop, test, and deliver scores of complex production systems and applications.

Methodologies: Model-driven development, UML 2.0, Hatley-Pirbhai, Structured Analysis/Design, Data Modeling, N-squared charts, others.

Languages: C#, Java, C++, Tcl, Prolog, Objective-C, Cobol, TAL, Fortran, PL/I, various assembly; HTML, CSS, JavaScript, XML. CORBA IDL, Microsoft IDL.

Databases: SQL Server, MySQL, Postgres, IMS.

Tools: Visual Studio, Jira, Basecamp, Bugzilla, Trac, Source Depot, Subversion, GSOAP, RoboDoc, CPP Unit, Junit, ActiveState Tcl. Netmon, Wireshark. Spec Explorer, Ranorex, SilkTest, QTP, Quality Center, Expect, Visual Studio Team System/Test Edition; others.

Operating Systems: All Windows clients, Windows Server 2K, 2K8; Windows Mobile/CE, Linux (Red Hat, Debian, Cent OS), BSD, Solaris, NeXT, OS/400, IRIX, Guardian, RTOS, MVS.

Networks: Cloud: REST, JSON; Microsoft: DCOM, Remote Desktop, Distributed Authorization, etc.; RFC protocols: HTTP, HTTPS, FTP, SMTP, DHCP, BEEP, SIP, TCP/IP, etc.; W3C protocols: SOAP, WSDL, XML, etc.; IEEE Protocols: WiFi, WiMax, Firewire, etc.