

Douglas Hoffman

BACS, MSEE, MBA, ASQ Fellow, ASQ-CSQE, ASQ-CMQ/OE

Summary

More than thirty years experience with software quality assurance. Over twenty years experience in managing, creating, and turning around software quality organizations. Management of medium sized software organizations to the Vice President level. Experience working with all departments effecting software quality.

Strategic and tactical planning for software quality in varied applications and industries. Background in engineering and management used to effectively work with all levels of an organization. Management specialties include evaluation and planning for organizational change, managing the creating of new quality organizations or transforming of existing quality groups to fulfill corporate visions. Technical specialties include organizational assessments, ROI based planning of software testing mechanisms, and developing architectures for automated testing. Most recent work focuses on organizational assessments, software test automation strategy planning, test automation architectural design, course development, instructing, and authoring.

Areas of Expertise

- Assessment and guidance for organization improvement
- Transformation of existing quality groups
- Management of Software Quality Assurance and Software Test groups at all levels
- Defining and implementing Quality Assurance Centers of Excellence
- Management consulting in strategic and tactical planning for software quality
- Return-on-investment based planning and implementation for software testing
- Creation of new quality organizations
- Software test automation architectural design
- Development of automated test oracles
- Selection and deployment of software tools

Managerial Profile

- Management of technical staff and Directors in software and computer systems organizations
- Collaborate with all departments and levels of management effecting software quality
- Recommend improvements of organization structure and development processes
- Organize, staff, and manage Quality Engineering, Process Engineering, Development, Technical Support, and Documentation groups
- Establish and manage quality functions for manufacturing and development
- Perform hiring searches (Software Quality Engineers, Quality Managers, and Development Managers)
- Instill awareness and discipline to improve quality and meet specific goals

Key Proficiencies

- Execute Quality Assessments in small to multi-billion dollar IT, software, and service organizations
- Develop strategies and tactics for quality software development in mission critical environments
- Recommend and direct cost-effective actions for improving testing, tools, and test environments
- Establish release procedures, test criteria, and version tracking to control quality of releases
- Conceive, implement, and administer software development environments
- Define and enact defect tracking systems, product quality methods, and standards
- Institute revision control systems
- Create and administer continuous improvement programs
- Author and implement Test Strategies, Test Plans, Test Procedures, and manual and automated Test Cases
- Research, analyze, and write recommendations for offshore outsourcing
- Integrate multi-national development and test teams
- Project manage complex IT deployments
- Eliminate unnecessary consumables in testing processes
- Shorten development integration cycles
- Reduce defects for large software application releases and lower defect levels for existing software
- Eliminate customer complaints over non-functioning releases
- Establish standards-compliant processes

Instruction

- Prepared and taught courses in: Software QA and Testing, Software Test Automation Design, Fundamentals of Software Test Automation, Software Project Management, Black Box Software Testing, Quality Management, ASQ-CSQE Certification Preparation, Software Test Management, Software Test Design, and Software Test Oracles
- Taught courses in: Software QA, Project Management, Black Box Software Testing, Bug Advocacy, Software Test Automation, Testing Web Applications, Web Security Testing, Mathematical Statistics, Information Design, Introduction to Information Systems Technology, Trends in Information Systems Technology, Information Systems Management, Strategic IT Planning, Human Resources Management, and Management by Communication

Employers and Clients

Adobe Systems
Blue Martini Software
Document Technologies, Inc.
Domestic Automation Corporation
Franklin-Templeton
Hewlett-Packard
Informix Software
Internal Revenue Service (US)
Knight-Ridder
LifeScan
MasPar Computer Corporation
NEC Technologies
Network Computing, Inc.

Palm Computers
Pyramid Technology
Quality Council of Indiana
S3 Corporation
Software Development Technologies (SDT)
Sun Microsystems
Systems Partners
University of California, Santa Cruz Extension
University of San Francisco
Versant Object Technology
ViewStar Corporation
Walker Interactive
Wind River Systems

Contact Information

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EDUCATION AND PROFESSIONAL

- MBA: Santa Clara University
- MSEE: U.C. Santa Barbara
- BA Computer Science: U.C. Santa Barbara
- Fellow of the American Society for Quality
- Founding member and current President of the Association for Software Testing (AST)
- Current Keynote, Invited Speaker, and Tutorial Chair for Pacific Northwest Software Quality Conference (PNSQC)
- Certificate in Software Quality Engineering (CSQE) from the American Society for Quality
- American Society for Quality Certified Manager of Quality/Organizational Excellence (CMQ/OE) [previously titled Certified Quality Manager]
- Credentialed California Community College Instructor for *Computer Science; Computer and Related Technologies*
- Program Co-Chair for the Third Conference for the Association for Software Testing (CAST 2008)
- Past Chair of ASQ's Santa Clara Valley Section (Section 0613)
- Past Chair of the Santa Clara Valley Software Quality Association (SSQA), a task group of the ASQ
- Visiting Professor of Electrical Engineering at Howard University
- Adjunct Professor in Information Systems Management at University of San Francisco
- Instructor in Software Engineering and Quality at UCSC-Extension
- Program Chair for the Third International Conference on Software Quality (ASQC Software Division)
- US Program Chair for the First World Congress on Software Quality (ASQC Software Division)
- Conference Chair for the Third SSQA Software Quality Conference
- Speaker at many conferences
- Senior member of ACM and IEEE
- ISO 9000: Lead Auditor Training (for both ISO9000 –1994 and ISO9000 –2000); past Registered Provisional Auditor
- IEEE Certificate for services rendered in furthering the objectives of IEEE at Howard University
- ASQC Software Division Certificate of Appreciation, Third International Conference on Software Quality
- ASQC Software Division Certificate of Appreciation, Fourth International Conference on Software Quality
- ASQC Software Division Certificate of Appreciation for First World Congress for Software Quality

Publications ^{1, 2}

“Why Tests Don’t Pass” Pacific Northwest Software Quality Conference (PNSQC)
October, 2009

“Why Tests Don’t Pass” Conference for the Association for Software Testing (CAST)
July, 2009

“Non-Regression Test Automation” PNSQC October, 2008

“Lessons for Testing From Financial Accounting” CAST July, 2008

“A Graphical Display of Testing Status for Complex Configurations” PNSQC
October, 2007

“Avoiding the ‘Test and Test Again’ Syndrome” CAST July, 2007

“Divide and Conquer” Better Software Magazine, Volume 7, Issue 1, January 2005

“Exhausting Your Test Options” Software Testing and Quality Engineering, Volume
5, Issue 4, July/August 2003

**“Overview of ASQ’s Certified Software Quality Engineer (CSQE) Body of
Knowledge”** Quality Week Conference 2002

“Blind Alleys in Automated Testing” Software Testing Analysis & Review (STAR)
East 2002

“Using Oracles in Test Automation” PNSQC October, 2001

“The Darker Side of Metrics” PNSQC October, 2000

“Mutating Automated Tests” SSQA May, 2000

“Cost Benefits for Test Automation” STAR West 1999

“Test Automation Architectures” Quality Week 1999

“Heuristic Test Oracles” Software Testing and Quality Engineering, Volume 1, Issue
2, April 1998

“A Taxonomy of Test Oracles” Quality Week 1998

“A Process for Measuring the Quality of Software Consulting” PNSQC 1994

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² Copies of papers and slides for presentations since 1995 are at <http://www.softwarequalitymethods.com/H-Papers.html>.

Presentations

“Bugs For Sale” IV Encontro Brasileiro de Testes de Software (EBTS, Brazil) April, 2010

“Test Oracles” IV Encontro Brasileiro de Testes de Software (EBTS, Brazil) April, 2010

“Five Test Automation Fallacies” Better Software Conference June, 2009

“Oracle Based Software Test Automation” Software & Systems Quality Conference, Germany (SQC) May, 2009

“Automating Results Comparison Isn’t Always Easy” Recife Summer School (RSS, Brazil) February, 2009

“Avoiding the ‘Test and Test Again’ Syndrome” Encontro Brasileiro de Testes de Software (EBTS, Brazil) October, 2008

“Non-Regression Test Automation” Pacific Northwest Software Quality Conference (PNSQC) October, 2008

“Lessons for Testing From Financial Accounting” 2008 (Conference for the Association for Software Testing, 2008)

“A Graphical Display of Testing Status for Complex Configurations” (PNSQC) October, 2007

“Avoiding the ‘Test and Test Again’ Syndrome” (CAST) July, 2007

“Tutorial on Advanced Automation Architectures” Conference for the Association for Software Testing (CAST) July, 2007

“Early Testing Without the Test and Test Again Syndrome” SSQA Nov. 2006

“Avoiding the Test-and-Test Again Syndrome” 2004 (2004 Better Software Conference)

“Using Test Oracles in Automation “ 2003 (Invited speaker, Fall 2003 Software Test Automation Conference)

“Architectures for Automated Testing” 2003 (PNSQC 2003)

“Automated Testing of Embedded Software“ 2003 (Invited speaker, Spring 2003 Software Test Automation Conference)

“Using Test Oracles in Automation “ 2003 (Invited speaker, Spring 2003 Software Test Automation Conference)

- “Using Test Oracles in Automation”** 2001 (PNSQC 2001)
- “What’s Different About Software”** 2001 (ASQ Section 0613 April)
- “Requirements for Test Automation”** 2000 (SSQA December)
- “The Darker Side of Metrics”** 2000 (PNSQC 2000)
- “Architecture and Design of Automated Software Tests”** 2000 (PNSQC Spring Workshop)
- “Oracle Approaches for Automated Testing”** 2000 (Quality Week 2000)
- “Mutating Automated Tests”** 2000 (SSQA)
- “21 CFR Part 11: Electronic Signatures, Electronic Records”** 2000 (ASQ Section 0613)
- “Failure Mode and Effects Analysis”** 2000 (ASQ Section 0613)
- “Mutating Automated Tests”** 2000 (STAR East 2000)
- “Requirements for Test Automation”** 1999 (PNSQC 1999)
- “Thoughts on Oracles and Software Test Automation”** (with Cem Kaner) 1999 (Quality Week 1999)
- “Analysis of The Taxonomy of Test Oracles”** 1998 (Fifth Los Altos Workshop on Software Testing)
- “Metrics for Metrics: Cost Analysis and Justification”** (Dev Strategic I/T Metrics Conference 1998)
- “Test Oracles; Planning Ahead for Test Automation”** 1998 (EBSSQA)
- “Fundamentals of Software Testing”** 1995 (ASQ)
- “Foundations of Software Quality”** 1994 (ASQ)
- “Measuring the Quality of Software Consulting”** 1994 (4th International Conference on Software Quality)
- “A Process for Measuring the Quality of Software Consulting”** 1994 (Quality Week 1994)
- “Some Measures of Quality of Software Consulting”** 1994 (ASQ)
- “A Method for Measuring Quality of Software Consulting”** 1994 (ASQ)

“Practical Software Metrics” 1993

"Fundamentals of Software Quality Assurance" 1992 - 1995 (ASQ Class)

“The Software Quality Group's Relationship to Development” 1993 (PNSQC 1993)

“The Role of the Quality Group's in Software Development” 1993 (Quality Week 1993)

“Preparing a Software Organization for CASE” 1992 (Quality Week 1992)

“Preparing an Organization for CASE” 1992 (Quality Week 1992)

“Assessing the Quality of a Software Development Project” 1991

“A Model for Evolution of Software Development Processes” 1991 (Quality Week 1991)

“Assessing Quality in Software Projects” 1991

“The Impact of Hardware Technology on Software Testing” 1990 (Quality Week 1990)

“Managing Technological Changes: Setting Your Horizons” 1989 (Quality Week 1989)

“Evolution of Software Quality and the Product Development Process” 1989

“Managing the Test Process” 1988 (Quality Week 1988)

A partial list of Copyrighted Courses Prepared and Taught:

Black Box Software Testing

Software Test Automation Design

Oracle Based Software Test Automation

CSQE Examination Preparation

Test Automation: A Context-Driven Approach (with Bret Pettichord)

Automated Software Tests: Architecture and Design

Architecture and Design of Automated Software Testing Environments

Design of Automated Software Tests (with Cem Kaner)

Black Box Software Testing (with Cem Kaner)

Software Project Management

Fundamentals of Software Quality Methods

Test Plans and Test Specifications

The Possible Roles of Software Quality Assurance

Priorities for Management of Software Quality

Who Should do the Testing, and When

The Cost of Quality

Software Process Metrics

A Practical Framework for Test Design and Development

When is the Testing Complete?

Product and Test Metrics

Priorities for Tests and Testing; Risk Management

Product Release Timelines and Processes

The Terminology and Language of Testing and Software QA

The Technology of Software Quality