

# INTERNATIONAL SOFTWARE Quality Week Europe

Brussels, BELGIUM

1 - 5 November 1999

Organized by



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## Lessons Learned

For the past twelve years Quality Week has firmly established itself as **THE ANNUAL EVENT** for software quality professionals worldwide. The foremost experts from academia and industry speak on process design, software test technology, software quality control, system reliability and availability, C++, Java, Web testing, client/server systems quality, Website quality modeling.

Join them to discuss Global & European issues, and to plan for future software quality trends.

At the close of the millennium, what did we learn?

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# Quality Week Europe

## Lessons Learned

*Advances in software quality technology have for years improved quality & assured faster delivery of software systems. But in this age of "Internet Time" challenges develop faster than solutions. At the dawn of the millennium, the call for software quality has never been more urgent, nor the applications more diverse. Find out what the real concerns, and solutions, are in the current software quality technology & engineering community of today's Global Village.*

*The Third International Software Quality Week brings together over 50 presentations by industry experts and university researchers from China to India, from Argentina to Canada and numerous European experts to discuss all aspects of critical issues that QA professionals are facing worldwide and to look into the current challenges presented to Europe. Take the lessons that they learned and their solutions home to apply at your workplace.*

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### PROGRAM POINTS

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**Pre-Conference Tutorials:** Thirteen full-day and half-day presentations by leading industry experts: Bart Broekman & Christian Hoos, Hans-Ludwig Hausen, Suzanne Robertson, Hanania Salzer, Ara Kouchakdjian & Larry Apfelbaum, Thomas Drake, Robert Binder, Tim Koomen & Ruud Teunissen, Isabella Wiczorek, Bill Bently, Gualtiero Bazzana & Enrico Fagnoni, T. Ashok and Robert Sabourin.

**Keynotes:** Talks from internationally acclaimed experts address "Lessons Learned" from many aspects: OO Testing, European Software Technology, Test Process Improvement, Control Flow Animation, Development Lifecycle and Process Improvement.

**Four-Track** Technical Conference: A full program of regular technical presentations:

**Tools & Technology Track:**

- Formal Methods in Robotics
- Test Automation in Telecommunications
- Automated Test Reuse
- Testing C++

- TESPRA
- Extreme Quality, and more

**Applications & Solutions Track:**

- Embedded Software
- Safety Related Control Software
- Developing Products in "Internet Time"
- Requirements Management Process
- Testing Metrics
- Error Trending

**Process & Management Track:**

- Change Control Process
- Cleanroom Management
- From ISO to CMM
- Customer Satisfaction
- Process Improvement
- Managing Test Costs

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### WHO SHOULD ATTEND

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- Lead QA/Test Experts and Managers who want to know about the latest methods and tools
- WebMasters who need to give assurances of quality about their WebSites
- Beginning QA/Test specialists who need to get a broad overview of the field
- Technologists who want to catch up on the state-of-the-art in software quality
- Programmers and developers who want to build higher quality code

**Bonus Conference: European Issues**

- Roadmaps for SPI
- Applying EFQM/SPICE in Industry
- Improving Software Documentation
- Test the EURO Effectively
- Apply for Funding from IST Program

**Bonus Conference: The Web**

- Ensuring Consistent Web Performance
- e-Commerce Reliability
- e-Commerce Functional Testing
- Testing for Java-based Web Software
- Website Quality Modeling & Assessment
- Writing a Handbook for Intranet

**Special Award Ceremonies:**

- Best Paper Award from **Gitek**
- Best Presentation Award from **Qualityhouse**

# MONDAY, 1 NOVEMBER, 1999

## ... TUTORIAL DAY #1 ...

9:00 - 12:00	A 1	<b>Bart Broekman Christian Hoos IQIP, Holland</b> <i>How to Automate Your Tests with Lasting Benefits? (Part I)</i>	B 1	<b>Hans-Ludwig Hausen GMD, Germany</b> <i>Software Metrology Basis</i>	C 1	<b>Hanania T. Salzer RTS Engineering, Israel</b> <i>ARTs (Atomic Requirements) Writing Workshop</i>	D 1	<b>Thomas Drake Coastal Research &amp; Technology, Inc. USA</b> <i>Testing Software Based Systems - People, Process &amp; Technology (Part I)</i>
<b>12:00-14:00 TUTORIAL DAY LUNCH AND NETWORKING</b>								
14:00 - 17:00	A 2	<b>Bart Broekman Christian Hoos IQIP, Holland</b> <i>How to Automate Your Tests with Lasting Benefits? (Part II)</i>	B 2	<b>Suzanne Robertson Atlantic, UK</b> <i>Making Requirements Visible: A Strategy for Quantifying Requirements and Constraints</i>	C 2	<b>Ara Kouchakdjian Larry Apfelbaum Q-Labs/Teradyne SST, USA</b> <i>State Modeling for Usage-based Testing</i>	D 2	<b>Thomas Drake Coastal Research &amp; Technology, Inc. USA</b> <i>Testing Software Based Systems - People, Process &amp; Technology (Part II)</i>

**A1 and A2: How to Automate Your Tests with Lasting Benefits? (Full Day).** This tutorial will show attendees step-by-step how to build a maintainable automated test suite; how to achieve more efficient use of precious testing time, more re-use and higher test quality with state-of-the-art test tool.

**B1: Software Metrology Basis.** Overall aim of the course is to make the attendees familiar with the methods and principles of software metrics for procedural, object-oriented and agent-based systems. Attendees will exercise proven techniques for goal directed measurement, scaling and assessment as part of an industry proven, standardized procedure for concurrent software quality assurance and final evaluation of certification.

**B2: Making Requirements Visible: A Strategy for Quantifying Requirements & Constraints.** This tutorial explores the quantifiable and hence testable characteristics of requirements and constraints. The emphasis is on making requirements visible so that we can apply a series of tests to ensure that they really are requirements. The idea is to arrive at a common understanding of each requirement.

**C1: ATRs (Atomic Requirements) Writing Workshop.** A half day hands-on tutorial where participants will become reasonably trained in writing atomic requirements (ATRs.) The tutorial is extensive enough to enable the participants to study and write more than a hundred different ATRs.

**C2: State Modeling for Usage-based Testing.** Using state models to describe usage provides a framework for understanding what a suite of usage scenarios is and is not doing. This same framework enables the systematic generation (manually or automatically) of a well-defined set of usage scenarios.

**D1 and D2: Testing Software Based Systems - People, Process & Technology (Full Day).** This tutorial will examine the challenges associated with testing our increasingly complex, network centered, software based information technology systems. The tutorial will reveal and discuss the limitations of current testing practices, the use of testing as part of a larger program risk mitigation strategy, the need for quality testing, the impact of bugs and more.

# TUESDAY, 2 NOVEMBER, 1999

## ... TUTORIAL DAY #2 ...

9:00 - 12:00	E 1	<b>Robert Binder RBSC Corporation, USA</b> <i>Modal Testing Strategies for Object-Oriented Systems (Part I)</i>	F 1	<b>Tim Koomen Ruud Teunissen IQIP, Holland Gitek, Belgium</b> <i>Stepwise Improvement of the Test Process Using TPI</i>	G 1	<b>William Bently mu-Research, USA</b> <i>How to Test an Object: The Information Flow Approach</i>	H 1	<b>T. Ashok VeriFone India Ltd, India</b> <i>A Model for a High Performance Test Organization</i>
<b>12:00-14:00 TUTORIAL DAY LUNCH AND NETWORKING</b>								
14:00 - 17:00	E 2	<b>Robert Binder RBSC Corporation, USA</b> <i>Modal Testing Strategies for Object-Oriented Systems (Part II)</i>	F 2	<b>Isabella Wieczorek, L. Briand, B. Freimut, M. Ochs, D. Pfahl &amp; J. Wuest Fraunhofer IESE, Germany</b> <i>Cost and Quality Measurement in Practice: An Integrated Approach</i>	G 2	<b>Gualtiero Bazzana &amp; Enrico Fagnoni Onion S.p.A, Italy</b> <i>Testing of Web-Based Applications</i>	H 2	<b>Robert Sabourin Purkinje Inc. Canada</b> <i>Bug Priority and Severity</i>

**E1 and E2: Modal Testing Strategies for Object-Oriented Systems (Full Day).** This tutorial presents new approaches for domain/state modeling to characterize class modality and shows how to produce effective test suites from these models. Participants in this seminar will learn how to develop models.

**F1: Stepwise Improvement of the Test Process Using TPI.** This tutorial deals with the TPI\*-model, which is based on current state-of-the-art test process improvement practices. The model gives practical guidelines for assessing the maturity level of testing in an organization and for step-by-step improvement of the process.

**F2: Cost and Quality Measurement in Practice: An Integrated Approach.** This tutorial provides the basic concepts and guidelines related to practical software measurement when used to address software cost and quality issues.

**G1: How to Test an Object: The Information Flow Approach.** The tutorial introduced a new white box method for the unit testing of an object. This method employs an advanced form of structural analysis known as information flow analysis. Information flow analysis provides a new family of coverage measures for object testing and has the potential to automatically generate the fundamental method sequences.

**G2: Testing of Web-Based Applications.** The tutorial focuses on testing methods and tools which can be successfully applied to the testing of Web-based applications, notably: Internet WWW servers, Intranet dynamic applications and Extranet e-commerce application.

**H1: A Model for a High Performance Test Organization.** The tutorial focuses on: How test engineering, test management, processes, metrics and people come together to build a high performance test organization. Issues and solutions to tackle people aspects in test groups. Testing as a formal engineering activity, implementation of a continuously improving test process.

**H2: Bug Priority and Severity.** The concept of the four-quadrants of priority and severity are taught and the class is clearly shown how business factors influence the quadrant of a bug! The class is shown how the elevator problems was actually in each quadrant depending on the perceived business context, which changed only as a result of listening to various voice messages on the phone! The class ends with a review of some actual defect arrival graphs from recent commercial product development efforts and provides an answer to the fundamental question of software engineering.

For all speakers' abstracts, please visit our website at: <http://www.soft.com/QualWeek/QWE99/qwe99.abs.html>

# WEDNESDAY, 3 NOVEMBER, 1999

## . . . . CONFERENCE PROGRAM . . . .

<b>K1</b>	<b>PLENARY SESSION AND KEYNOTE PRESENTATIONS #1</b>
<b>8:30</b>	<b>Conference Introduction: Edward Miller, QWE99 Program Chair</b> <b>Robert Binder, RSBC Corporation, USA: Lessons Learned: The State of the Art in Object-Oriented Testing</b> <b>Rainer Zimmerman, European Commission: Lessons Learned: European Software Technology</b>

### REFRESHMENTS

<b>1</b>	TOOLS / TECHNOLOGY	APPLICATIONS / SOLUTIONS	PROCESS / MANAGEMENT	BONUS CONFERENCE <i>European Issues</i>
<b>10:00</b>	<b>1T Axel Lankenau &amp; Oliver Meyer</b> <b>Bremen Institute of Safe Systems, Germany</b> <i>Formal Methods in Robotics: Fault Tree Based Verification</i>	<b>1A Nathalie Fuchs &amp; Steven Van Schil</b> <b>Gitek, Belgium</b> <i>Structured Testing, a Must in a Validation Critical Environment</i>	<b>1M Steven Quirke</b> <b>Sanlam, South Africa</b> <i>How We Implemented a Change Control Process in a Large Financial Services Organization</i>	<b>1B Pedro Gutierrez</b> <b>European Software Institute, Spain</b> <i>Roadmaps for SPI</i>

### REFRESHMENTS

<b>2</b>	TOOLS / TECHNOLOGY	APPLICATIONS / SOLUTIONS	PROCESS / MANAGEMENT	BONUS CONFERENCE <i>European Issues</i>
<b>11:00</b>	<b>2T Roberto Delmiglio, F. Basili, E. Bendinelli, A. Manini, A. Rappelli &amp; G. Rumi</b> <b>Italtel SpA, Italy</b> <i>Test Automation in Telecommunications Software: A Case Study on GPRS</i>	<b>2A Tim Koomen &amp; Rob Kuijt</b> <b>IQUIP Informatica, Holland</b> <i>Improving Developer's Tests</i>	<b>2M Kishor Bapat</b> <b>EWO Software, USA</b> <i>Cleanroom Management Begins with Clean Applications</i>	<b>2B Luigi Buglione &amp; Elixabete Ostolaza</b> <b>European Software Institute, Spain</b> <i>Achieving Business Excellence in SPI: Applying the EFQM / SPICE Integrated Model in Industry</i>

**12:00 - CONFERENCE LUNCH AND NETWORKING**

**13:00 Dessert Served in Exhibits Room Visit the Expo**

<b>3</b>	TOOLS / TECHNOLOGY	APPLICATIONS / SOLUTIONS	PROCESS / MANAGEMENT	BONUS CONFERENCE <i>European Issues</i>
<b>14:00</b>	<b>3T Mika Salmela, Jarmo Kalaoja &amp; Jukka Korhonen</b> <b>VTT Electronics, Finland</b> <i>Automated Test Reuse for Product Families</i>	<b>3A Henrik Oertel</b> <b>Institut fur Flugmechaanik, Germany</b> <i>Developing Embedded Software for a Helicopter Testbed</i>	<b>3M John Elliott</b> <b>Systems and Software Engineering Centre, UK</b> <i>Customer Satisfaction through Improved Requirements Understanding</i>	<b>3B Pietro Moro &amp; Antonio Cicu</b> <b>OPTEC Srl, Italy</b> <i>Improving Software Documentation: Results of the ESSI PIE DOCPROVE Project</i>

### REFRESHMENTS

<b>4</b>	TOOLS / TECHNOLOGY	APPLICATIONS / SOLUTIONS	PROCESS / MANAGEMENT	BONUS CONFERENCE <i>European Issues</i>
<b>15:00</b>	<b>4T Martin Gonzalez-Rodriguez</b> <b>University of Oviedo, Spain</b> <i>Automatic Usability Testing for Hypermedia Navigational Graphs</i>	<b>4A Wolfgang A. Halang &amp; Matjaz Colnaric</b> <b>Fern Universitaet, Germany</b> <i>Engineering Safety Related Control Software in Developing Countries</i>	<b>4M Marcelo Dalceggio &amp; Alvaro Ruiz de Mendarozqueta</b> <b>Banco Rio de la Plata SA, Argentina</b> <i>Automated Software Inspection Process</i>	<b>4B Andreas Rudolf &amp; Rainer Pirker</b> <b>IBM, Austria</b> <i>How to Test the EURO Effectively</i>

### REFRESHMENTS

<b>5</b>	TOOLS / TECHNOLOGY	APPLICATIONS / SOLUTIONS	PROCESS / MANAGEMENT	BONUS CONFERENCE <i>European Issues</i>
<b>16:00</b>	<b>5T Richard Harmon</b> <b>Pi Technology, UK</b> <i>Automated Testing of COM Software in a RAD Environment</i>	<b>5A Walter Baziuk</b> <b>Nortel Networks Inc. Canada</b> <i>Developing Highly Reliable Products in "Internet Time"</i>	<b>5M Hanna Luden</b> <b>Getronics Software, Holland</b> <i>Software Project Evaluation as a Vehicle for Software Process Improvement</i>	<b>5B Otto Vinter</b> <b>Software Engineering Mentor, Denmark</b> <i>How to Apply for Funding from the IST Programme</i>

**17:00 - 18:00 Cocktail Party in The Exhibit Hall**

<p style="text-align: center;">Visit The Tools Exposition                  Wednesday, 3 Nov. -- 10:00 AM to 18:00 PM                  Thursday, 4 Nov. -- 10:00 AM to 16:00 PM</p> <p style="text-align: center;">Cocktail Party -- 17:00 PM to 18:00 PM on Wednesday</p> <p>VENDOR TECHNICAL PRESENTATIONS on Wednesday &amp; Thursday:                  Please see schedule in the EXPO Guide</p>	<p style="text-align: center;">Special Thanks to QWE'99 Industry Sponsors:</p> <p><b>Gold Sponsors:</b> CMG Information Technology                  Gitek                  IQUIP Informatica B.V.                  Mercury Interactive                  Qualityhouse B.V.                  Reasoning</p> <p><b>Silver Sponsor:</b> ps_testware                  Tesnet Israel</p>
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# THURSDAY, 4 NOVEMBER, 1999

## CONFERENCE PROGRAM

<b>K2</b>	<b>PLENARY SESSION AND KEYNOTE PRESENTATIONS #2</b>			
<b>8:30</b>	<b>Conference Introduction: Edward Miller, QWE99 Program Chair</b> <b>Martin Pol, IQUIP Informatica B.V.: Lessons Learned: Test Process Improvement</b> <b>Harry Sneed, SES Software-Engineering Service GmbH: New Technology: Control Flow Animation as a Means of Class Testing</b> Announcement of QWE'99 Gitek Award for Best Paper			

### REFRESHMENTS

<b>6</b>	<b>TOOLS / TECHNOLOGY</b>	<b>APPLICATIONS / SOLUTIONS</b>	<b>PROCESS / MANAGEMENT</b>	<b>BONUS CONFERENCE</b> <i>The Web</i>
<b>10:00</b>	6T <b>Misha Dorman</b> <i>IPL Information Processing Ltd, UK</i>  <i>Testing C++: Why It's Hard and How to Do It Well</i>	6A <b>Jin-Cherng Lin</b> <i>Tatung Institute of Technology, Taiwan</i>  <i>An Efficient Measurement for Assertion Placement</i>	6M <b>Lieven Schouwaerts</b> <i>Gitek, Belgium</i>  <i>How to Implement Structured Testing in Narrow Time Boxed Projects</i>	6B <b>Scott Yara</b> <i>Sandpiper Networks, Inc., USA</i>  <i>Performance 2000: Ensuring consistent Web Site Performance</i>

### REFRESHMENTS

<b>7</b>	<b>TOOLS / TECHNOLOGY</b>	<b>APPLICATIONS / SOLUTIONS</b>	<b>PROCESS / MANAGEMENT</b>	<b>BONUS CONFERENCE</b> <i>The Web</i>
<b>11:00</b>	7T <b>Feng Nan</b> <i>IBM China Research Lab, China</i>  <i>A New Tool for Measuring a Server's QoS with Multi-Workload</i>	7A <b>Torsten Baumann, Rex Black, Serban Teodorescu &amp; Gordon Page</b> <i>Interactive Media, Canada</i> <i>Integrated Test Automation of IVR-Telephony Applications and Client-Server Call Center Applications</i>	7M <b>Rob Baarda &amp; Tim Koomen</b> <i>IQUIP Informatica BV, Holland</i>  <i>Risk Based test Strategy</i>	7B <b>Edward Miller</b> <i>Software Research, USA</i>  <i>E-Commerce Reliability and Web Testing</i>

### 12:00 - CONFERENCE LUNCH AND NETWORKING

13:00 Dessert Served in Exhibits Room Visit the Expo

<b>8</b>	<b>TOOLS / TECHNOLOGY</b>	<b>APPLICATIONS / SOLUTIONS</b>	<b>PROCESS / MANAGEMENT</b>	<b>BONUS CONFERENCE</b> <i>The Web</i>
<b>14:00</b>	8T <b>Narayana Jayaram</b> <i>University of Westminster, UK</i> <i>Towards A Test Process Framework for Distributed Component-based Software</i>	8A <b>Dave Locke</b> <i>Rational Software Corp. USA</i>  <i>How to Implement a Use Case-Driven Requirements Management Process</i>	8M <b>K. Dinesh, Pankaj Jalote, M.R. Bhashyam &amp; S. Raghavan</b> <i>Infosys Technologies Ltd, India</i>  <i>Managing the Transition from ISO to High Maturity Levels of CMM</i>	8B <b>Steven Rabin</b> <i>Interworld Corporation, USA</i>  <i>e-Commerce Functional Testing and Performance Benchmarking - Methodology and Criteria</i>

### REFRESHMENTS

<b>9</b>	<b>TOOLS / TECHNOLOGY</b>	<b>APPLICATIONS / SOLUTIONS</b>	<b>PROCESS / MANAGEMENT</b>	<b>BONUS CONFERENCE</b> <i>The Web</i>
<b>15:00</b>	9T <b>Johan Swinnen</b> <i>Gitek, Belgium</i>  <i>TESPRA: A Practical and Integrated Method for Test Control, Reporting and Estimation</i>	9A <b>Peter Froehlich &amp; Johannes Link</b> <i>ABB Corporate Research, Germany</i> <i>Modeling Dynamic Behavior Based on Use Cases</i>	9M <b>Tim Koomen</b> <i>IQUIP Informatica BV, Holland</i>  <i>Test Process Improvement Experiences: Everything You Always Wanted to Know...</i>	9B <b>Sam Guckenheimer</b> <i>Rational Software Corp. USA</i>  <i>Effective Testing for Java-based Web Software</i>

### REFRESHMENTS

<b>10</b>	<b>TOOLS / TECHNOLOGY</b>	<b>APPLICATIONS / SOLUTIONS</b>	<b>PROCESS / MANAGEMENT</b>	<b>BONUS CONFERENCE</b> <i>The Web</i>
<b>16:00</b>	10T <b>Thomas Drake</b> <i>Coastal Research &amp; Technology, USA</i> <i>Extreme Quality: What Can We Learn From the Computer and Video Games Industry</i>	10A <b>Mats Grindal</b> <i>Enea Data AB, Sweden</i> <i>A Post-mortem Analysis of a Semi-Successful Client Server System Test Project</i>	10M <b>David Powell</b> <i>CMG Pic, UK</i>  <i>Test Management -- Solutions for Project Improvement</i>	10B <b>Benedikt Lutz</b> <i>Siemens AG Ostereich, Austria</i>  <i>Writing a Software Engineering Handbook for the Intranet</i>

### 17:00 - 18:00 Special Evening Event

QWE'99 presents a truly global team of speakers! To learn more about their backgrounds and their topics, visit our Web site at:

<http://www.soft.com/QualWeek/QWE99/qwe99.program.html>

Once there, click on Speaker's Name for photos and biographies, click on Presentation Title for descriptions of paper content

# FRIDAY, 5 NOVEMBER, 1999

11	TOOLS / TECHNOLOGY	APPLICATIONS / SOLUTIONS	PROCESS / MANAGEMENT	BONUS CONFERENCE <i>The Web</i>
9:00	<b>11T Minsheng Liu &amp; Arthur Gorges</b> <i>Huengsberg AG, Germany</i>  <i>Improving Quality in the Software Development Process on the Basis of UML</i>	<b>11A T. Ashok, Hema Gollamudi &amp; Piyali Biswas</b> <i>VeriFone India Ltd, India</i>  <i>A Model for Analysis of Software Testing Metrics for Process Improvements</i>	<b>11M Jens Pas</b> <i>ps_testware, Belgium</i>  <i>Managing Your Test Costs</i>	<b>11B Hans-Ludwig Hausen</b> <i>GMD, Germany</i>  <i>Seven Views to Website Quality Modeling and Assessment</i>

## REFRESHMENTS

12	TOOLS / TECHNOLOGY	APPLICATIONS / SOLUTIONS	PROCESS / MANAGEMENT	BONUS CONFERENCE <i>The Web</i>
10:00	<b>12T Johannes Ryser</b> <b>Martin Glinz</b> <i>University of Zurich, Switzerland</i>  <i>A Practical Approach to Validating and Testing Software Systems Using Scenarios</i>	<b>12A Niels Bruun Svendsen</b> <i>B-K Medical A/S, Denmark</i>  <i>Error Trending, Why &amp; How</i>	<b>12M Rob van der Pouw Kraan</b> <i>Qualityhouse BV, Holland</i>  <i>Test Outsourcing: The First Experiences</i>	<b>12B Elie Kanaan</b> <i>Mercury Interactive, France</i>  <i>E-Commerce: Where Application Testing Means Staying Business</i>

K3	PLENARY SESSION AND KEYNOTE PRESENTATIONS #3
11:00	<b>Nick Borelli, Microsoft, USA:</b> <i>Seizing Control of the Development Lifecycle (QW'99 Best Paper Award)</i> <b>Otto Vinter, Bruel &amp; Kjaer Sound &amp; Vibration Measurement A/S:</b> <i>Experience-Based Approaches to Process Improvement</i> <b>Conference Conclusion: Edward Miller, QWE99 Program Chair</b> Announcement of QWE'99 Qualityhouse Award for Best Presentation

## EXTRA PRESENTATIONS

## TWO-DAY VENDOR EXHIBIT

Wednesday, Thursday and Friday		Visit Over 20 Exhibitors on Wednesday and Thursday, 3-4 Nov.		
Extra 1	<b>Narayana Jayaram, University of Westminster, UK</b> <i>Addressing Quality of Service Issues in E-Commerce Environment</i>	<p>The vendor showcase brings you the latest technology and tools. You'll have the opportunity to:</p> <p>Visit exhibitors representing today's most advanced solutions for your software process needs. You can do all your product investigation at one time.</p> <p>Heighten your knowledge of the industry. Learn how you can effectively implement proven techniques immediately.</p> <p>Gain a competitive edge. You can see live demonstrations of the products that will dominate the next decade!</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <b>CMG Information Technology</b>   <b>Computer Associates International, Inc.</b>   <b>ErgoLight</b>   <b>Gitek</b>   <b>Integri</b>   <b>IQUIP Informatica B.V.</b>   <b>IPL</b>   <b>McCabe &amp; Associates</b> </td> <td style="width: 50%; vertical-align: top;"> <b>Mercury Interactive</b>   <b>Q-Labs</b>   <b>Qualityhouse B.V.</b>  <b>ps_testware</b>   <b>Rational Software</b>   <b>Reasoning</b>   <b>Software Research, Inc.</b>   <b>Testnet Israel</b>                      and more...                 </td> </tr> </table>	<b>CMG Information Technology</b>  <b>Computer Associates International, Inc.</b>  <b>ErgoLight</b>  <b>Gitek</b>  <b>Integri</b>  <b>IQUIP Informatica B.V.</b>  <b>IPL</b>  <b>McCabe &amp; Associates</b>	<b>Mercury Interactive</b>  <b>Q-Labs</b>  <b>Qualityhouse B.V.</b> <b>ps_testware</b>  <b>Rational Software</b>  <b>Reasoning</b>  <b>Software Research, Inc.</b>  <b>Testnet Israel</b> and more...
<b>CMG Information Technology</b>  <b>Computer Associates International, Inc.</b>  <b>ErgoLight</b>  <b>Gitek</b>  <b>Integri</b>  <b>IQUIP Informatica B.V.</b>  <b>IPL</b>  <b>McCabe &amp; Associates</b>	<b>Mercury Interactive</b>  <b>Q-Labs</b>  <b>Qualityhouse B.V.</b> <b>ps_testware</b>  <b>Rational Software</b>  <b>Reasoning</b>  <b>Software Research, Inc.</b>  <b>Testnet Israel</b> and more...			
Extra 2	<b>Fawzy Soliman</b> <i>University of Technology, Sydney, Australia</i> <i>Managing the E-Business Operations</i>			
Extra 3	<b>Mark Paap, IQUIP Informatica BV, Holland</b> <i>Test Tool Selection: Best Practices</i>			
<b>Conference Hotel</b> <b>The Sheraton Hotel &amp; Towers</b> <b>Rogierplein / Place Rogier, 3</b> <b>B-1210 Brussels</b>  <b>Telephone: +32(2)224-3111 Fax: +32(2)224-3456</b>  For more information about the hotel and the program, please visit the Quality Week Web Page at: <a href="http://www.soft.com/QualWeek/QWE99/">http://www.soft.com/QualWeek/QWE99/</a> (click on "Program").				

## INTERNATIONAL ADVISORY BOARD

Special thanks to the International Advisory Board, composed of international academics, industrialists, and consultants, for its crucial support in creating a broad-based, high quality technical event.

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Mr. Bart Broekman, IQUIP, Netherlands	Ms. Suzanne Robertson, Atlantic, England	Mr. Otto Vinter, Bruel & Kjaer, Denmark
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Mr. Adrian Cowderoy, MMHQ, England	Dr. Antonio Serra, Quality Labs, Italy	

# . . . . REGISTRATION FOR QUALITY WEEK . . . .

**REGISTRATION:** Please complete this form and send it to Software Research Institute, 901 Minnesota Street, San Francisco, CA 94107, USA with your check, or FAX this form with your payment details. **FAX to +1 (415) 550-3030.** You can also **register on the Web:** <http://www.soft.com>, or **by email:** [qw@soft.com](mailto:qw@soft.com).

You can pay by **credit card** (Visa, Mastercard, American Express), **by check**, or by **bank wire transfer**. Please handle the credit card payments by FAX or over the phone.; do not E-Mail credit card information. The entire conference fee is payable prior to the program. **Make checks payable to SR Institute.** No cancellation fee is applicable until 1 October 1999; \$250 thereafter. No refunds will be given for cancellations after 22 October. Call the registrar to obtain your cancellation number. **Substitutions** are permitted with written notification until 22 October.

**FEES:** Registration includes all seminar and conference material, Continental Breakfast, Lunches, Refreshments, and Cocktail Parties.

Registered & Paid	Before 1 October	After 1 October	Group Rates
Tutorial Day #1	US\$650 (600 Euro)	US\$675 (650 Euro)	no discount
Tutorial Day #2	US\$650 (600 Euro)	US\$675 (650 Euro)	no discount
Both tutorial days	US\$1050 (950 Euro)	US\$1200 (1100 Euro)	no discount
Conference + Tools Exhibition	US\$1200 (1150 Euro)	US\$1450 (1400 Euro)	10% discount
1-Day Tutorial + Conference	US\$1500 (1450 Euro)	US\$1700 (1650 Euro)	10% discount
5-Day Quality Week Event COMBINED	US\$1850 (1750 Euro)	US\$2100 (1950 Euro)	10% discount

**NOTE:** A **check, credit card, or bank transfer** payment must be received at The SR Institute by **1 October** to benefit from the lower rates.

**SAVE: Benefit from the reduced group rate!** Send your **team** of software QA specialists, managers and developers. If you register two or more representatives at one time, deduct 10% of the fee for each attendee from the Conference or COMBINED (Conference + Tutorial) prices only.

**CONFERENCE HOTEL:** Quality Week will be held at the luxurious Sheraton Brussels Hotel, 3 Place Rogier, B-1210 Brussels. Within easy walking distance of the best in facilities, restaurants, clubs, theaters, shops, and points of interest.

### Please Type or Print:

Name: \_\_\_\_\_  
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 FAX: ( ) \_\_\_\_\_  
 E-mail: \_\_\_\_\_

Primary Job Function:  Tester  SQA Engineer  Analyst  
 Developer  Project Lead  User  QA Manager  
 Other \_\_\_\_\_

Industry \_\_\_\_\_  
 Platforms Used \_\_\_\_\_ Programming Language Used \_\_\_\_\_

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### Please check one:

- Tutorial Day 1     Tutorial Day 2     Both Tutorial Days  
 3-Day Conference + Tools Exhibition  
 1-Day Tutorial + 3-Day Conference + Tools Exhibition  
 2-Day Tutorials and Conference COMBINED

### Please choose morning and afternoon tutorials for each day attended:

- Day1-AM:** A1    B1    C1    D1  
**Day1-PM:** A2    B2    C1    D2  
**Day2-AM:** E1    F1    G1    H1  
**Day2-PM:** E2    F2    G2    H2

### Discount for supporting organizations:

- Member ACM     Member ASQ     Member ESI  
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**Bank Transfer Registration:** Please send the entire required amount by wire transfer to either of these two accounts; customer pays wire fees:  
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**Kredietbank nv**, Geldenaaksebaan 149, B-3001 Heverlee, Belgium: Account #422-0037759-88, Quality Week Account, SWIFT Code: KREDBEBB.  
 Please be sure to include the required 21% VAT (Value Added Tax) in addition to the registration amount if you are using this account.

**Credit Card Registration:** For credit card registration, complete the form and then FAX the QWE'99 Registrar with your credit card information. Please do not include credit card information in Email.

**IMPORTANT NOTE:** If you register for QWE'99 on the Web and you do NOT hear from us within 3 business days, please send Email to [qw@soft.com](mailto:qw@soft.com).

## HOTEL ACCOMODATIONS

Please make your own reservations. November tends to be a busy month, so book early. Rooms are being held at special conference rates until **9 October**. **The conference hotel is the The Sheraton Brussels, 3 Place Rogier, B-1210 Brussels.**

HOTEL (Rates per night)	SINGLE	DOUBLE/TWIN	PHONE	FAX
Sheraton Hotel ****	6.950BEF	7.600BEF	+32(2)224-3111	+32(2)224-3456
Crowne Plaza Brussels *****	6.900BEF	6.900BEF	+32(2)203-6200	+32(2)203-4392
Le Dome ***	3.500BEF	4.000BEF	+32(2)218-0680	+32(2)218-4112

For more information about the hotels, please visit the Quality Week Web Page at <http://www.soft.com/QualWeek/QWE99/> (click on "Hotels").  
**Prices per night include tax, services, and buffet breakfast, except at the Crowne Plaza where breakfast is BEF 700 per person.**

## •••• KEY SPEAKER LIST ••••

**Robert Binder** has over 22 years of software development experience. He is President of **RBSC Corp.**, providing consulting and training in software engineering and software process improvement since 1984. Mr. Binder has written extensively about software development, including *Application Debugging* and his forthcoming *Testing Object-Oriented Systems*. He writes a regular column on testing for "Object" magazine. He developed the FREE methodology for testing object-oriented systems. He is the Chair of a newly formed study group to develop an IEEE standard for built-in test for Object-Oriented software. Mr. Binder has an MS in Electrical Engineering and Computer Science from the University of Illinois at Chicago, and a BA and MBA from the University of Chicago. He is an IEEE Senior Member, a member of the ACM, and holds the CDP and CCP.

**Bart Broekman** studied physics in Utrecht in the Netherlands. He started his career in IT at Philips Telecommunications & Data Systems, where he gained experience in programming, testing and quality assurance. Five years later he joined the software company IQUIP Informatica B.V. where he fulfilled assignments ranging from test consultancy to organizing and managing large test projects. He aided in developing the structured test approach TMap, a de facto standard in the Benelux, and has implemented this in numerous organizations which have profited from his now more than 13 years testing experience. Currently, he is a member of the R&D department of IQUIP Software Control Testen where he works closely together with Martin Pol. In this function he keeps track of current developments and trends in the testing world and develops matching test approaches, for instance on test automation and testing in RAD environment. Bart is frequently giving courses in the Benelux on testing and he is regularly invited to make presentations on national and international seminars and conferences.

**Nick Borelli** is currently a Group Test Manager at Microsoft Corporation and is responsible for the World-Wide releases of the award-winning application, Microsoft Word. Nick has over 15 years experience in both Software Testing and Development and has worked in both small start-ups such as Pensoft, GO and EO, as well as working at Triad Systems, Apple and Software Publishing Corporation.

**Thomas Drake** is a software and systems quality specialist and management and information technology consultant for Coastal Research & Technology, Inc. in the United States. He currently leads and manages a U.S. government agency-level Software Engineering Knowledge Based Center's software quality engineering initiative. As part of an industry and government outreach/partnership program, he holds frequent seminars and tutorials covering code analysis, software metrics, OO analysis for C++ and Java, coding practice, testing, best current practices in software development, the busi-

ness case for software engineering, software quality engineering, project management, organizational dynamics and change management, and the people side of information technology. Mr. Drake has personally measured and analyzed over 125,000,000 lines of Java, C++, C, Ada, Fortran, Pascal, and Assembler code plus others. He supports the "weak-link" theory of software development and the use of software entropy principles as a risk identifier for generating higher quality software-based information technology systems. He is the principal author of a chapter on "Metrics Used for Object-Oriented Software Quality" for a CRC Press Object Technology Handbook published in December of 1998. In addition, Mr. Drake is the author of a theme article entitled: "Measuring Software Quality: A Case Study" published in the November 1996 issue of IEEE Computer. Mr. Drake is listed with the International Who's Who for Information Technology for 1999, is a member of IEEE and an affiliate member of the IEEE Computer Society. He is also a Certified Software Test Engineer (CSTE) from the Quality Assurance Institute (QAI). He considers himself a quality advocate and a software archaeologist.

**Christiaan Hoos** works at IQUIP Informatica BV since 1993 where he conducts assignments in many organizations in various aspects of testing, especially in setting up test organizations and improving their test processes. Together with Bart Broekman he developed an approach for the automation of the test process, called TAKT. Currently he is manager in the TMap Consultancy department and responsible for implementing this approach in many organizations. Christiaan is frequently asked for lecturing on testing and making presentations on international conferences.

**Edward Miller** is President of **Software Research, Inc.**, San Francisco, California. Dr. Miller has worked in the software quality management field for 25+ years in a variety of capacities. He pioneered in the development of automated software testing methodologies and conceived an entire family of tools a.o. TCAT, the first Coverage analyzer and CAPBAK, the first Capture/Playback tool, and has established himself as a highly-respected leader in the field. He was chairman of the 1985 1st International Conference on Computer Workstations, and has participated in IEEE conference organizing activities for many years. He is the author of *Software Testing and Validation Techniques*, an IEEE Computer Society Press tutorial text, as well as numerous articles on software testing. He is chairman of the Quality Week Conferences in the U.S. and Europe since 1988. Dr. Miller received his Ph.D. (Electrical Engineering) Degree from the University of Maryland, an M.S. (Applied Mathematics) degree from the University of Colorado, and BSEE from IOWA State University.

**Martin Pol**, has more than 25 years experience in the information business. He was responsible for the development of the structure testing

approach TMap and the creation of TPI. He is the co-author of three books on TMap and TPI, Also published in English and German. He is a regarded presenter at conferences and training courses throughout Europe and in the USA. Martin twice chaired EuroSTAR in 1996 and 1997 and is chairman of the Dutch Special Interest Group in Software Testing, TestNet. Recently he received the "European Testing Excellence Award" for his contribution to the field of testing across Europe.

**Harry Sneed**, graduated from the University of Maryland with a Masters Degree in Public Administration and Information Sciences in 1969. His work has been as a Programmer/Analyst at the U.S. Navy Department, as a Programmer and Instructor at the Volkswagen Foundation, as a Systems Programmer and Project Leader at Siemens, as an independent Test Consultant, as a Software Lab Leader for the SZAMOK and SZKI Institutes in Hungary, as a Reengineering Project Leader at the Union Bank of Switzerland, as the manager of a German Software House, and as an ESPRIT Research Consultant in Italy and England. Currently, he is working as a tool developer for an Austrian Software House developing OO-Software for banks in Vienna. He has published more than 100 technical articles both in English and German Computer Science Journals and Proceedings, in addition to 11 books in Germany, including two on testing. In addition to his publishing work, Sneed has developed more than 50 different Software Engineering Tools for maintenance, project calculation, software measurement, software testing, software reverse & reengineering, software design and software auditing. He is currently in the program committees of the International Conference on Software Maintenance, the IEEE Workshop on Reverse Engineering, the IEEE Workshop on Program Comprehension, and the European Conference on Maintenance and Reengineering. His main interests are in Software-Metrics, -Maintenance, -Migration and -Test. He is a member of the IEEE Computer Society and the ACM.

**Otto Vinter** is managing a software technology and process improvement group at Bruel & Kjaer responsible for projects to improve the software development process. He has also been the Driving force in the company's transition from procedural programming to Object-Oriented development. Otto has managed software development projects for 25+ years; with Bruel & Kjaer from 1986, before that with the Danish branch of Control Data Corporation, and with Regnecentralen. He received his Masters Degree in Computer Science from the Danish Technical University in 1968. He is an associate teacher for BSc. level education in Computer Science, is an active participant in Danish software-knowledge exchange groups, performs monitoring activities for clients, and is on the programme committee of several international conferences.

**For all speakers' biographies, please visit our website at: <http://www.soft.com/QualWeek/QWE99/qwe99.bios.html>**