

# HARNNESS

the power of Agile.

## HP Application Lifecycle Management solutions

Looking to improve the quality and consistency of your Agile initiatives?

HP Application Lifecycle Management solutions goes beyond traditional development management. It's the Agile solution that delivers quality *and* value, speed *and* control for the whole team *and* the whole lifecycle.

Outcomes that matter.

Get more information at  
[hp.com/go/agile](http://hp.com/go/agile)





January/February 2010 \$9.95 [www.StickyMinds.com](http://www.StickyMinds.com)

# BETTER SOFTWARE

The Print Companion to

**StickyMinds.com**

**JOIN THE CROWD**  
Stretch your test  
budget

**BURIED TREASURE**  
Turn IT into gold

**VIRTUAL LABS  
IN THE CLOUD**



# Cut Dev Costs... Without Cutting Heads.



*It's tough to look  
at your team and  
decide who should  
stay and who  
should go.*

Rally's customers are proven to be  
50% faster to market and  
25% more productive.

Avoid cutting heads with the only  
Application Lifecycle Management provider  
to ensure your Agile success.

**Learn More about our Guarantee Success Program  
at [rallydev.com](http://rallydev.com)**



Scaling Software Agility

© 2009 Rally Software Development Corp



# Save time while protecting software quality.



© 2009 Seapine Software, Inc. All rights reserved.

## Swiftcover.com cut their testing time in half with TestTrack Studio and QA Wizard Pro, while still providing the quality their customers expect.

Seapine's end-to-end Software Quality Assurance (SQA) solutions help you deliver quality products faster. Start with **QA Wizard Pro** for automated testing and add **TestTrack Studio** for issue tracking and test case management—integrated quality assurance solutions that together reduce testing time, saving you money and improving customer satisfaction.

- Reduce quality assurance costs with automated functional and regression testing.
- Manage test case development, defect assignments, and QA verification with one application.
- Track which test cases have been automated, schedule script runs, and link test results with defects.

“*So much of success boils down to time. QA Wizard Pro and TestTrack Studio allow us to be more profitable because we do more in less time.* — Test Manager, Swiftcover”

Learn how to test faster while protecting quality. Visit **www.seapine.com/betterswift**



*No one development method  
is ideal for all projects.*

*So choose an ALM platform that  
supports all methods.*

## DevSuite

### DevSpec



Requirements  
Management



### DevPlan



Project Planning



### DevTrack



Implementation  
and Defect Tracking



### DevTest



QA test  
Management

## DevTest Studio

## Project Studio

*The best method for your project depends on the nature of your software requirements, from fully pre-defined (waterfall), to unknown or dynamically changing (Agile), or anywhere in between. Whether you require Agile, iterative, test-driven, requirements-driven, waterfall, or CMMI, DevSuite will provide the platform you need.*

### DevSuite

For requirements-driven Agile, Iterative, CMMI, and Waterfall processes.

### Project Studio

For task-driven Agile and Iterative project & resource management.

### DevTest Studio

For test-driven development, quality management, and defect tracking.

**FREE!**

TechExcel ALM solutions are FREE for small teams.  
See [www.techexcel.com/free](http://www.techexcel.com/free) for details.



## Cover Story

### VIRTUAL LABS IN THE CLOUD 16

Learn how to overcome infrastructure management challenges using virtual lab automation, and discover which cloud—private, public, or hybrid—best meets your organization's needs. *by Ravi Gururaj and Srihari Palangala*

## Features

Click Here  
The Tools  
2010  
Services  
Guide

## Columns & Departments

### In Every Issue

Contributors 6

Editor's Note 7

Product Announcements 29

10 Things You Might  
Not Know About ... 36

Ad Index 38

**Better Software magazine**—The print companion to StickyMinds.com brings you the hands-on, knowledge-building information you need to run smarter projects and deliver better products that win in the marketplace and positively affect the bottom line.

**Subscribe today to get six issues.**

Visit [www.BetterSoftware.com](http://www.BetterSoftware.com)  
or call 800.450.7854.

### OFFER APPRECIATIONS 22

We don't always appreciate the power of taking a moment to reflect on past performance. Find out how real change can happen when a team invests in time together. *by Linda Rising*

### CROWDSOURCED SOFTWARE TESTING 26

In response to shrinking budgets and tight launch deadlines, crowdsourced software testing is a growing trend. Here are six ways an on-demand testing team can complement your in-house QA efforts. *by Doron Reuveni*

### TECHNICALLY SPEAKING 9

**Oh, When Will They Ever Learn?** • *by Lee Copeland*

After reading the book *The Day the Phones Stopped*, which was published in 1991, Lee began wondering why the poor software quality and complaints about development and testing documented in this book are the same complaints we hear today.

### INSIDE ANALYSIS 10

**The Right Business Analysis Tool** • *by Matthew Leach*

The continued rise of the business analysis profession has led to a surge in software tools specifically designed for the business analyst. Find out what types of tools are in the marketplace today and how to select the right business analysis software tool for your organization.

### TEST CONNECTION 12

**Swan Song** • *by Michael Bolton*

Black Swans, in the book by Nassim Nicholas Taleb, are improbable and unexpected events with a severe impact. One of the most important goals of testing is to find problems in the product. What can testers do to help reduce the likelihood that we'll encounter a Black Swan?

### MANAGEMENT CHRONICLES 14

**Finding Nuggets in the IT Gold Mine** • *by Clarke Ching*

Development teams often are unaware of the commercial impacts of the software improvements they deliver. Often, the prioritization of work is done based on technical, rather than commercial, considerations. Based on a real-world example, this story explores the commercial benefits enabled by delivering in short release cycles and prioritizing according to bottom-line benefits.

### THE LAST WORD 37

**What HR Doesn't Know about Scrum**

*by Michael James*

Scrum's relentless "inspect-and-adapt" cycle leads to change beyond software development practices. Scrum teams have reported changes in the way they think about human resources management. This article outlines ways Scrum teams may want to modify HR's beliefs and practices.



### TRAINING WEEKS

[www.sqetraining.com/public](http://www.sqetraining.com/public)

#### Testing

**March 22–26, 2010**

San Diego, CA

**April 12–16, 2010**

Boston, MA

**May 17–21, 2010**

Chicago, IL

### SOFTWARE TESTER

#### CERTIFICATION

[www.sqetraining.com/certification](http://www.sqetraining.com/certification)

**February 16–18, 2010**

Toronto, ON

**February 23–25, 2010**

Mountain View, CA

Atlanta, GA

**March 2–4, 2010**

Tampa, FL

**March 9–11, 2010**

Raleigh, NC

Scottsdale, AZ

**March 16–18, 2010**

Irvine/Los Angeles Area, CA

Vienna, VA



### CONFERENCES

#### STAREAST 2010

**Software Testing  
Analysis & Review**

[www.sqe.com/stareast](http://www.sqe.com/stareast)

**April 25–30, 2010**

Rosen Shingle Creek  
Orlando, FL

#### Better Software Conference

[www.sqe.com/bsc](http://www.sqe.com/bsc)

**June 6–11, 2010**

Caesars Palace  
Las Vegas, NV

#### Agile Development Practices | West

[www.sqe.com/adpwest](http://www.sqe.com/adpwest)

**June 6–11, 2010**

Caesars Palace  
Las Vegas, NV

#### STARWEST 2010

**Software Testing  
Analysis & Review**

[www.sqe.com/starwest](http://www.sqe.com/starwest)

**September 26–  
October 1, 2010**

Hilton San Diego Bayfront  
San Diego, CA

#### Agile Development Practices | East

[www.sqe.com/adpeast](http://www.sqe.com/adpeast)

**November 14–19, 2010**

The Rosen Centre  
Orlando, FL

# BETTER SOFTWARE

Publisher

**Wayne Middleton**

President

**Drew Thoeni**

Vice President of Publishing

**Holly N. Bourquin**

Editor in Chief

**Heather Shanholtzer**

#### Editorial

Managing Technical Editor

**Lee Copeland**

Editor, StickyMinds.com

**Francesca Matteu**

Managing Editor, Multimedia

**Joseph McAllister**

Production Coordinator

**Cheryl M. Burke**

#### Design

Creative Director

**Catherine J. Clinger**

#### Advertising

Senior Advertising Sales Manager

**Shae Young**

Production Coordinator

**April Evans**

#### Circulation and Marketing

Circulation Coordinator

**Jamie Green-Gago**

Marketing Coordinator

**Stephanie Fender**

A PUBLICATION OF  
SOFTWARE QUALITY ENGINEERING



#### CONTACT US

Editors: [editors@bettersoftware.com](mailto:editors@bettersoftware.com)

Subscriber Services: [info@bettersoftware.com](mailto:info@bettersoftware.com)

Phone: 904.278.0524, 888.268.8770

Fax: 904.278.4380

Address:

*Better Software* magazine  
Software Quality Engineering, Inc.  
330 Corporate Way, Suite 300  
Orange Park, FL 32073

# Next Generation Automated UI Testing



## Object-based Capture & Replay Editor

- ✓ Maintainable recordings via the actions table editor
- ✓ Integration of Ranorex repositories



## Automated Testing of Web & Windows Applications

- ✓ Winforms / C# / VB.NET
- ✓ WPF / Silverlight / Win32 / MFC
- ✓ Flash / Flex / Web 2.0 / AJAX /  



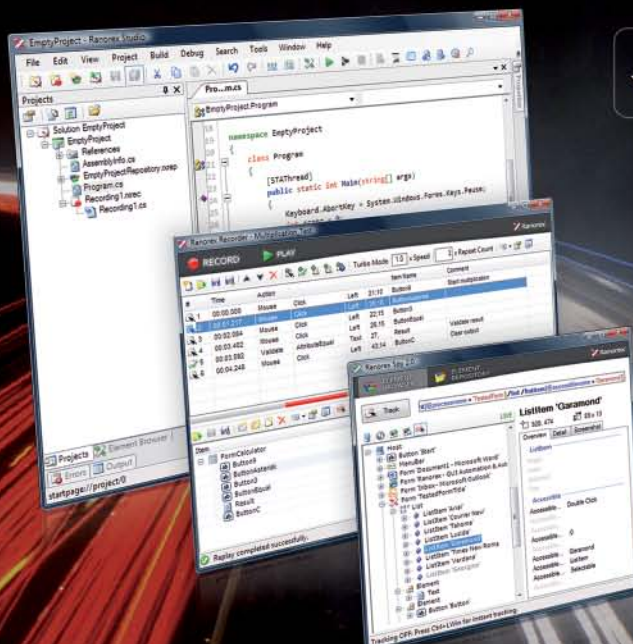
## Maintainable UI Object Repositories

- ✓ Easy to maintain all types of UI objects
- ✓ Separate test automation from UI identification



## Write tests in C#, VB.NET and IronPython

- ✓ Automatic and flexible code generation in C#, VB.NET and IronPython
- ✓ All-on-one test environment with code editor, code completion and debugging



Get your 30-day Trial  
[www.ranorex.com](http://www.ranorex.com)



## Contributors



**MICHAEL BOLTON** lives in Toronto and teaches heuristics and exploratory testing in Canada, the United States, and other countries. He is co-author, with James Bach, of *Rapid Software Testing* and a regular contributor to *Better Software* magazine. Contact Michael at [mb@developsense.com](mailto:mb@developsense.com).



An independent consultant and regular columnist on StickyMinds.com, **CLARKE CHING** is a passionate advocate of agile software development and a chairman of the AgileScotland special interest group. He is the author of the book *Rolling Rocks Downhill*, in which he demonstrates how to use lean, quality, and agile techniques to make your projects more productive and predictable. Read more about Clarke's work at [www.clarkeching.com](http://www.clarkeching.com).



**LEE COPELAND** has more than thirty years of experience in the field of software development and testing. He has worked as a programmer, development director, process improvement leader, and consultant. Based on his experience, Lee has developed and taught a number of training courses focusing on software testing and development issues. Lee is the managing technical editor for *Better Software* magazine, a regular columnist for StickyMinds.com, and the author of *A Practitioner's Guide to Software Test Design*. Contact Lee at [lcopeland@sqa.com](mailto:lcopeland@sqa.com).



**RAVI GURURAJ** is founder and CTO of VMLogix. Ravi has more than nineteen years of product development, management, and marketing experience, having held positions at companies including Trilogy, UberWorks, and Dialogic and having founded two software startups that designed and licensed reusable software components for application developers worldwide.



**MICHAEL JAMES** is a software process mentor and Certified Scrum Trainer with Danube Technologies. His primary focus is on the engineering practices that enable agile project management practices. Having worked as a software developer for more than twenty years, Michael has deep experience with automated testing that predates the Extreme Programming movement.



**MATTHEW LEACH** is a consultant with Doreen Evans Associates, Inc., a professional services firm that has pioneered the use of software tools for business analysis and helps organizations improve their business analysis practices. He can be reached at [mleach@doreenevans.com](mailto:mleach@doreenevans.com) and [www.doreenevans.com](http://www.doreenevans.com).



**TIM LISTER** is a principal of The Atlantic Systems Guild ([www.systemsguild.com](http://www.systemsguild.com)). Tim is a well-known expert and lecturer on software management techniques. He coauthored the popular book *Peopleware: Productive Projects and Teams*.



**SRIHARI PALANGALA** is the director of product marketing at VMLogix and has spent more than eight years in software product management, marketing, and business development at Microsoft and OPNET Technologies.



**DORON REUVENI** co-founded uTest in 2007. Doron has more than twenty years of experience in Web-based technologies, software QA methodologies, and software development, delivering software solutions to Fortune 500 companies as well as many innovative startups. More information can be found at [www.utest.com](http://www.utest.com) or the Software Testing Blog at [blog.utest.com](http://blog.utest.com).



**LINDA RISING'S** background includes university teaching and industry work in a variety of domains. An internationally known presenter on patterns, retrospectives, agile development, and the change process, Linda has authored numerous articles and four books, the most recent being *Fearless Change: Patterns for Introducing New Ideas*, with Mary Lynn Manns.



## **RESOLVE TO BUILD BETTER SOFTWARE**

I don't know about you, but I'm especially excited to see the start of this new year. It's time to put the challenges of 2009 behind us and plan for growth and success in 2010.

We're here to help you start the year off right by including the 2010 Tools & Services Guide in this issue. With dozens of tools and services listed—covering everything from configuration management to defect tracking to testing—you are sure to find a solution to fit almost any software need.

In addition to the resources in the Tools & Services Guide, we've got some great articles in this issue that address some common obstacles you may be dealing with on your projects.

Our cover story, "Virtual Labs in the Cloud," looks at two key management challenges faced by software engineering labs and explains how virtual lab automation in the cloud—be it public, private, or a hybrid—can accelerate time to market and improve software quality.

Also in this issue, Linda Rising describes her experience with "Offer Appreciations," a simple exercise she has used successfully to bring dysfunctional teams and alienated team members back in sync.

Suffering from shrinking budgets and tight launch deadlines? Using "Crowdsourced Software Testing" to complement in-house testing might be the answer you've been looking for.

As always, I hope you enjoy this issue of *Better Software* magazine. I hope you find this issue's articles and bonus Tools & Services Guide the catalyst to your most productive, quality-filled year ever. Email me to let me know how you've put this issue to work for you.

Happy Reading!

Heather Shanholtzer

HShanholtzer@sqa.com



# Testing Under Pressure?

## We Can Help.



**Check  
Out New  
2010 Training  
Courses Now  
Available!**



### The more training you take the greater the savings!

Maximize the impact of your training by combining courses in the same location. Combine a full week of training for the largest discount! For a complete list of courses available, visit [www.sqetraining.com](http://www.sqetraining.com) or call 888.268.8770 or 904.278.0524 for pairing discount options.



### Choose from 14 specialized training courses:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Software Tester Certification—Foundation Level			Mastering Test Design	
Writing Testable Requirements			Requirements-Based Testing	
Risk-Driven Software Testing		Testing with Use Cases	Performance, Load, and Stress Testing	
Agile Testing Practices		Testing Under Pressure	Test Estimation & Measurement	Mastering Test Automation
Test Process Management		Leadership for Test Managers	Test Process Improvement	

### TESTING TRAINING WEEKS

**March 22–26, 2010** *San Diego, CA*

**April 12–16, 2010** *Boston, MA*

**May 17–21, 2010** *Chicago, IL*

Improve your skills and help your organization increase its performance through targeted training. Delivered by top software consultants, training is one of the best investments you can make to meet your business objectives.



The following courses are PMI Certified:

- Software Tester Certification—Foundation Level
- Mastering Test Design



Let SQE Training come to you. For more information about on-site training courses, contact SQE Training at 888.268.8770 or 904.278.0524 x212 or 233 or email [onsitetraining@sqe.com](mailto:onsitetraining@sqe.com).

# Oh, When Will They Ever Learn?

by Lee Copeland

I'd like to be a voracious reader, but I rarely have uninterrupted time to sit down with a stack of good books. Luckily, every so often, I take very long airplane rides and have a chance to read. Recently, I finished *The Day the Phones Stopped* by Leonard Lee. It's a layman's introduction to the world of software and its disasters, and an interesting read.

I was familiar with many of the software failures recounted in the book: the AT&T nationwide telephone switch failure, the Therac-25 radiation therapy system that emitted lethal doses of radiation, computerized baggage-handling systems that misdirected luggage, and the ineffectual performance of the Patriot missile during Operation Desert Storm.

Other failures, however, were new to me: faulty blood bank software that erased donor records, allowing AIDS-infected blood to be used in transfusions; the crash of the Saab-Scania Gripen jet fighter that didn't respond to pilot commands; 747-400 airplane engine throttles that mysteriously shut off by themselves in mid-flight; the B-1B bomber with subsystems that interfered with each other's operation; and the sinking of the *HMS Sheffield* during the Falklands War because the captain made a phone call using the same frequency as an incoming enemy Exocet missile, preventing its detection.

The book is chock-full of statements familiar to us: "[Computer programs] are more complex ... than perhaps any other human construct" (Fred Brooks); "It's impossible to test for one hundred percent of all possible conditions. There are so many conditions that you just can't test for every conceivable situation" (Karl Blesh, AT&T); "As you approach the 'drop-dead' date when a program's supposed to be finished, they often short-cut the testing" (Jim Wilbern, KPMG Peat Marwick); "Unrealistic testing and unanticipated situations are a common theme in the world of soft-

ware problems" (Leonard Lee); "There's no way you can guarantee a computer system's going to do the right thing under all possible circumstances. No matter how carefully you've designed it, it's probably not good enough" (Peter Neumann, SRI International). My favorite is "Complete review of software testing is often impractical" (Robert Britain, NEMA). According to Britain, not only is complete testing impossible, even reviewing the testing that *was* done but is not practical.

For me, the most interesting thing about this book is that it was published in 1991—eighteen years ago. The examples of poor software quality and complaints about development and testing documented in this book are the same complaints we hear today. It seems that two decades have passed and nothing substantive has changed.

What can bring about change? It is my experience that people and organizations change for three reasons. First, they are required to. Second, they are in so much pain that even change becomes more attractive than the status quo. Third, people develop a vision of a better future that inspires and motivates.

In the first case, "required to," some external entity will "beat us with a stick" if we don't change. Examples are "Become CMMI Level 3 by this date or lose the contract" or "Become a certified developer or tester or risk not being employable." External forces can be effective in fostering change. (Typically, these forces have unintended consequences, neither envisioned nor understood, but that's for another column.) But there seem to be few effective corrective forces in our industry: Projects fail to deliver, yet, we begin new projects;

“... we can all imagine a different and better future, but it seems so remote, it doesn't inspire us.”

processes that produce failed projects are used for the next project; people who produced failed projects are employed on the next project. Einstein once said, "Problems cannot be solved by the same level of thinking that created them," but we continue, stuck in our ways.

The second force to effect change is pain. As a consultant, I often help organizations quantify the pain

they are suffering (defective software, market share loss, high personnel turnover, etc.). However, human beings seem capable of absorbing huge amounts of pain rather than making a change. As an example, reflect back on a personal relationship you've been in that went sour. How long did you remain in that relationship, absorbing the pain, rather than change?

And, as for creating a vision of a better future, we can all imagine a different and better future, but it seems so remote, it doesn't inspire us. As Leonard writes, "The probability that [a] crisis could happen again without warning doesn't seem to bother too many people. Even those who depend on the [technology] for their livelihood seem to simply take this all in stride as just another hazard of daily life in the modern age." Not a vision that inspires us to a better future.

Are we, the IT community, willing to accept poor quality software and continue our complaining for another decade or two? Now is the time to become effective change agents, seeking allies with power to force changes, quantifying the cost we are paying for poor quality, and building a vision of a brighter future for all. **{end}**



# The Right Business Analysis Tool

by Matthew Leach

Experts have stated that of the projects that fail, 71 percent can be traced back to requirements issues. It is clear that we need to identify means to improve the efficiency and effectiveness of our requirements solutions and thus improve this deplorable percentage. To reach a higher state of requirements excellence, business analysts must focus on three improvement areas: communication and collaboration; structure, rigor, and completeness; and traceability and relationships.

**Communication and collaboration:** An effective business analysis approach requires clear and consistent communication among business analysts, users, and stakeholders. This sharing of information enables meaningful collaboration and improves the quality and accuracy of requirements.

**Structure, rigor, and completeness:** Requirements definition is not as simple as pulling statements out of thin air or blindly repeating the wishes of users. Developing meaningful requirements necessitates a sophisticated level of analysis, which requires the use of models, diagrams, and other business analysis products to gain an in-depth understanding of the users' and stakeholders' needs.

**Traceability and relationships:** Few requirements or business analysis artifacts offer sufficient detail alone. It is the combination of these artifacts and their relationships to one another that provide the complete view of a system that is required for the latter stages of the software development lifecycle (SDLC).

To support these three improvement areas, organizations should introduce software tools that support the requirements lifecycle and cater to the specialized needs of the business analyst. The implementation of a specialized business analysis tool can greatly benefit each of these core areas and, in turn, decrease the overall time needed for requirements development, increase requirements quality, and minimize rework.



ISTOCKPHOTO

The most popular requirements definition tool today, Microsoft Word, was never intended to be one. For years, business analysts have depended on standard office productivity software—Microsoft Word, Excel, and PowerPoint—as tools of their trade. Overextending and forcing these tools to perform tasks for which they were never designed limit our productivity, increase costs and schedule, and do more harm than good.

There is a better way, but navigating the myriad business analysis tools to find the right solution can be difficult. Only by understanding the types of tools that exist, identifying your organization's constraints and needs, and knowing what traits to look for can you make an informed choice for your organization and its software development projects.

## Business Analysis Tools 101

The majority of software products for the business analyst can be broken down into two distinct categories based on functionality and the products' places within the requirements lifecycle.

**Requirements definition tools:** Software products designed to aid the business analyst in the elicitation and documentation of requirements are considered requirements definition tools. This category includes computer-aided software engineering tools, visualization products, and business process modeling software. These tools are deployed during the planning and requirements phase of a project. Requirements definition tools improve the quality of the requirements and are designed to aid business analysts in communicating with stakeholders. They provide a means to link IT and the business through standard languages, such as UML, or through the development of visualizations. These tools are adept at documenting several views of the candidate system, and some support the standard architecture frameworks, such as Zackman, DODAF, and TOGAF.

**Requirements management tools:** Once requirements have been defined, requirements management tools pick up where definition tools left off. They store

---

**“A robust, repository-based tool solution that supports modeling, collaboration among stakeholders, requirements traceability, and integration with testing and application development is ideal, particularly with respect to moderate- to high-risk projects.”**

---

requirements in a single location, allow you to view relationships between requirements, and track changes. Requirements management tools are effective when used within organizations with a mature requirements process and skilled business analysts. Unlike requirements definition tools, requirements management tools do not improve the quality of the requirements during elicitation but maintain the requirements during subsequent phases of the SDLC, resulting in fewer overlooked requirements and a tighter integration with other project artifacts.

There are tools that do not fall into either the requirements definition or requirements management categories. Hybrid tools represent business analysis tools that contain functionality that supports both practices. Functionality may not be as mature in hybrid tools, but they provide cost savings and allow users to perform their work in a single tool.

Each type of tool has a different purpose and features suited to it. When selecting a tool, decide where your organization needs to improve and select the tool suited to that area of improvement.

## Selecting Your Business Analysis Tool

A robust, repository-based tool solution that supports modeling, collaboration among stakeholders, requirements traceability, and integration with testing and application development is ideal, particularly with respect to moderate- to high-risk projects. However, organizations and projects vary in maturity and complexity. The selection of a tool solution must reflect these variations. To evaluate a tool, consider the traits of both the tool and your organization:

**Organizational maturity:** Be honest and evaluate the maturity of the business analysis practice within your organization. Conduct an assessment of your

organization utilizing a business analysis maturity model, which will offer insight into the level of complexity that your organization can support. Implementing an overly complex solution will slow tool adoption. Instead, select a tool that not only provides the functionality that your organization needs but one that also will grow with you over time as business analysis maturity increases. For organizations at a starting maturity level, selecting a requirements definition tool will be far more effective than a requirements management tool.

**Scalability:** Your organization will take on projects of different sizes, and not every project needs a full business analysis tool solution. Tools range in complexity from solutions for large advanced projects to back-of-the-napkin documentation tools. An ideal solution should scale to meet your project's needs.

**Lifecycle integration:** The majority of the work performed by the business analyst is undertaken during the early phases of a project, but that work influences all other phases of the SDLC. A business analysis tool—particularly requirements management tools—must be capable of supporting activities within the entire SDLC by providing the ability to trace work done during development, testing, and implementation back to requirements. If a tool cannot provide support across the SDLC, its usefulness is diminished.

**Simplicity and the user experience:** Business analysts use Word, Excel, and PowerPoint for one reason: They offer a positive user experience. Any new business analysis tool should provide the same. The user interface must be easy to navigate and relatively intuitive. Commonly used functionality should be easily accessible. Look to minimize the number of mouse clicks that a user will need when performing common tasks.

### Information accessibility and reporting:

Ease of compatibility and widespread use is a reason the Microsoft Office suite has continued to be used for business analysis work. Consider tools that allow users to access and share information easily either through a shared repository or through reporting capabilities that generate documents in commonly accessible formats such as RTF or HTML.

**Cost:** The cost of tools varies greatly. Some are available as free downloads; others can cost up to \$10,000 a license. Evaluate the cost and benefit of each tool, focusing on the features your organization needs and the relative cost of each feature. Beware of hidden costs of tool implementations. Additional features, software add-ons, hardware upgrades, and training and support can add to the upfront cost of purchasing software.

Selecting a business analysis tool is no easy undertaking. The successful implementation of a business analysis tool necessitates an in-depth understanding of the people, processes, and technology involved. However, by understanding the type of tool you require, your organization, and what to look for, it is possible to make an informed decision that will benefit your organization by improving your business analysis capability. {end}



**The evaluation criteria for business analysis tools should change based on the needs of an organization. What criteria are you using for your organization? What steps are you taking in your organization to implement business analysis software tools?**

▼

Follow the link on the [StickyMinds.com](http://StickyMinds.com) homepage to join the conversation.



# Swan Song

by Michael Bolton

From birth, the turkey sees people as kind, considerate caregivers. The farmer feeds the turkey, keeps it warm and dry, and protects it from predators. Every day, the turkey receives more confirmation of the fundamental benevolence of the human species. Then, a few days before Thanksgiving, the turkey gets an unpleasant surprise.

This story, cheerfully cribbed from Bertrand Russell, illustrates the theme of *The Black Swan* [1], an entertaining and insightful book by Nassim Nicholas Taleb. Formerly a trader of stock options and still an occasional adviser to hedge funds, Taleb says that his principal goal in life is not to be a turkey. He proposes that, in a complex and highly uncertain world, we can defend ourselves from rude shocks by being skeptical empiricists and by avoiding several kinds of fallacies and biases. The book reads like a charter for skilled testers.

A Black Swan, Taleb says, is a rare event that is unexpected and inexplicable, has extreme consequences, but, in retrospect, appears to be easy to anticipate and explain. Historically, all swans were known with certainty to be white—until explorers arrived in Australia and found black swans by the thousands. It took only one black swan to disprove the statement that all swans were white. That should remind us that test suites designed to confirm our belief that the program is working should convince us of no such thing. Passing tests are white swans. So, how do we avoid being surprised by the black ones?

When we test, we use models. We model the test space, deciding what is in scope for testing. We map the structure of the program with flowcharts and diagrams. We model coverage in different ways to better discover different kinds of problems. Each model is a representation—a *re-presentation*—of something more complex, so something about the model is very likely to be wrong. Taleb



ISTOCKPHOTO

explains where the danger lies: “Models and constructions, those intellectual maps of reality, are not always wrong; they are wrong only in some specific applications. The difficulty is that a) you do not know beforehand (only after the fact) *where* the map will be wrong, and b) the mistakes can lead to severe consequences. These models are like potentially helpful medicines that carry random but very severe side effects.” [2]

One antidote is to have many different models and to vary their use. Another antidote is to alternate continuously between focusing and defocusing heuristics. Testing texts often talk about focusing: starting the program from a known, clean state; following straightforward, deterministic use cases; taking precise steps that are traceable to a specific model; being consistent and methodical; producing expected, predicted results; and biasing both our actions and our reporting toward making the test easy to reproduce and easy to debug.

Yet, defocusing has an important role, too. Our real-world clients don’t reset their systems after every activity.

They aren’t usually like us. They present a wide variety of tasks, roles, temperaments, and behaviors. Their complex actions often don’t fit our expectations, and they typically don’t care how the product fits our specifications or requirements documents. They *do* care about the product’s matching their requirements, whether those requirements were documented, implicit, or unanticipated. Often, we don’t have sufficient access to the customer to understand what those requirements are from moment to moment. To find the sorts of problems that our users can discover, we often need rich and complex scenarios, long sequences of actions, and tests that are hard to pass rather than easy to justify. As Taleb says, “The last thing that you need to do when you deal with uncertainty is to focus. The ‘focus’ makes you a sucker; it translates into prediction problems.” [3] And, although we can predict confidently that there will be bugs, we can’t predict what they’ll be. Bugs are by their nature unpredictable and some are unpredictable. If they were predictable, we presumably wouldn’t let them happen.

**“The turkey’s problem is that it has incomplete information about the world, its models aren’t sufficient to anticipate the fate that will befall it, and experience gives it all the more reason to feel confident.”**

We’re often advised to model risk in terms of “probability times impact.” Yet, our notions of probability, impact, and the function that relates them to risk are also models, so a risk assessment based on them produces an environment favorable to Black Swans. In 1995, Intel used that kind of approach to evaluate the impact of the floating point division bug, both on end-users and on its own business. Because no previous processor erratum had ever caused such a ruckus, Intel’s risk model didn’t incorporate the emotional and public relations impact of the story. The company was promptly walloped by the Black Swan, a writedown, and a huge drop in its stock value. A caution, though: Thanks to the narrative fallacy—another target in Taleb’s sight—it’s easy for us to tut-tut in retrospect and say that Intel should have handled the problem differently. We know how the story ends, so we now fool ourselves into believing that we could have done better. Humility is important.

Taleb refers to the probability-times-impact sort of calculation as the “ludic fallacy,” the tendency to model reality in terms of games of chance. To illustrate the problem, he introduces two characters, Fat Tony and Dr. John. Each is told that a fair coin has been flipped ninety-nine times and has come up heads each time. Each is asked the odds of tails the next time. Dr. John, a statistician, provides the statistically correct answer: 50 percent, since previous outcomes should have no influence on the next. Fat Tony, a streetwise operator, says to forget the “fair coin” business; the odds of the coin coming up heads again is a near certainty.

Dr. John’s problem, says Taleb, is that he’s working from a model of reality that is both hypothetical and idealized, and that even with the evidence of a highly improbable event, he’s unwilling to explore the world outside his model. The turkey’s problem is that it has incomplete

information about the world, its models aren’t sufficient to anticipate the fate that will befall it, and experience gives it all the more reason to feel confident. This is the problem of induction, believing that the future will be just like the past. The misgivings we feel for the turkey and the smugness we feel over Dr. John should warn us about a confirmatory approach to testing.

We can confirm things about the product using *checks*—individual observations of some aspect of the system, linked to a true-or-false decision rule, that can be done by a machine. Checks, especially in the form of automated unit tests, are very valuable. In support of test-driven development, checks provide rapid feedback to the programmer about the emerging design of the code. Checks aid refactoring by exposing unexpected and undesired changes. Checks expose important problems before they leave the programmer’s workspace, and they’re fast—enormous numbers of them can be done at machine speed. Yet, we should be wary, because developing and analyzing checks requires real skill in testing and programming. More importantly, confirmatory checks inevitably reflect our models, rather than challenging them. Those aren’t new concerns; in 1961, Leeds and Weinberg wrote:


One of the lessons to be learned ... is that the sheer number of tests performed is of little significance in itself. Too often, the series of tests simply proves how good the computer is at doing the same things with different numbers. As in many instances, we are probably misled here by our experiences with people, whose inherent reliability on repetitive work is at best variable. With a computer program, however, the greater problem is to prove adaptability, something which is not trivial in human functions either. Conse-

quently we must be sure that each test does some work not done by previous tests. To do this, we must struggle to develop a suspicious nature as well as a lively imagination. [4]

So, maybe checking is best left to a machine, rather than to humans acting like one. That frees us to do testing: exploring, discovering, investigating, and learning about the product by using human variability, open expectations, and the capacity to recognize new models and new risks. Remember this: *Explorers* found the black swans. We can’t get rid of Black Swans, but maybe we can find some of them and break a few of their eggs.

...

This is my last Test Connection column. I’d like to thank Brian Marick, who almost four years ago gave me the opportunity—along with the freedom and responsibility—to write what I wanted to write about the fascinating subject of software testing. Thank you to the patient editors and staff of *Better Software* magazine. Thanks to James Bach and Jerry Weinberg who provided invaluable reviews of the columns of which I’m most proud. Above all, thanks to Lee Copeland, whose wisdom and decency inspire me deeply. {end}



**Another of Taleb’s ideas in *The Black Swan* is to consider lowering the impact of unexpected risks. How do you do that in your organization?**

Follow the link on the [StickyMinds.com](http://StickyMinds.com) homepage to join the conversation.

### Sticky Notes

For more on the following topic go to [www.StickyMinds.com/bettersoftware](http://www.StickyMinds.com/bettersoftware).

■ References



# Finding Nuggets in the IT Gold Mine

by Clarke Ching

“I’d never heard of CalaFragalogistics Industries until we spoke after my course. You’re like most other factories, right? Except that rather than making stuff, you repair stuff.”

I’d attended Brandon’s “economics of software development” course earlier in the week, and I’d invited him to spend a day working with us. Unfortunately, he was booked solid for the next four months, but he had managed to find a spare hour before his flight back home that morning. He had said he’d spend the hour with me at no charge, provided I showed him around our factory. I had grabbed the opportunity. My company needed all the help it could get; we were going broke.

“That’s right,” I said. “Our customers include about 20 percent of the electronics retailers in this part of the world. We fix products that their customers have returned within their warranty periods. Our 400 factory technicians process more than 4,000 units each day.”

I led Brandon to the factory entrance where I handed him a pair of antistatic overshoes. I gave him the standard safety speech then I took him on a tour of the factory. We passed by the three main production lines, through the warehouse, and ended the tour at the staff canteen. I bought two coffees, and we walked toward my office.

“We release code at least once a month. Eighteen months ago, we released twice a year. It was a surprisingly easy improvement to make technically, and we like it because each release is smaller, easier to test, and easier to roll out to users. It’s a lot less stressful, and our business managers like it because we’re a lot more flexible than we used to be so they get their requests completed sooner. But, lately, I’ve been feeling like we could do more. Trouble is, I don’t know what it is that we should be doing differently. Frankly, I’ve run out of ideas.”

We arrived at my office, and Brandon



ISTOCKPHOTO

asked me to elaborate on what was bugging me.

“Well, we’re very busy. I mean, look at our request wall.” I pointed to the large cork board on the back wall. It had four clearly marked columns: Pending, Happening, Waiting to Release, and Finished, with small index cards pinned across the board. The Pending and Finished columns were full with overlapping cards. The Happening and Waiting to Release columns had just a few cards each.

I pointed at the pending column. “We have plenty of work to keep us busy for at least the next year, but—to be frank—the interesting work has dried up. You see, when we started releasing monthly, our sales people were delighted because, more than once, they closed big sales by promising that we would include specific requests in our next release. But sales have dropped off recently, and now we’re back to working on the less interesting—and less profitable—stuff.”

Brandon held up his hand, signaling me to stop.

“New sales have dropped?”

“Yup.”

He paused, thought for a moment, then asked, “How is business?”

“Not so good.” I told him that Cala-

Fragalogistics Industries had a lot of competitors—efficient competitors—and we had to discount our prices in order to keep the customers we had.

“So, you’re no longer bringing in new customers, and you’re making less money from your existing customers. Are you profitable?”

I screwed up my face, not sure how much I could tell him. I figured that so long as I didn’t mention specific numbers I wouldn’t get myself in trouble. “Some months we make a modest profit; some months we don’t.”

“Hmmm,” Brandon said. “So, you’re barely profitable. Why have new sales dried up?”

“I, ah, don’t really know.”

“Is it because your factory is running at capacity and you simply can’t do any more work, so there is no point in selling it; or do you have capacity to do more work, but no one wants to buy it?”

I played back his question, twice, in order to figure out what he meant, and I thought I saw a glimmer of where he was taking me.

“Oh, wow. I get it. Our factory is at full capacity,” I said. “I’d not realized until now, but that’s the key reason why our sales guys have lost interest in us. They’ve been told not to sell any more

## STORY LINES

- **Internal IT teams are traditionally seen as a cost center, but they are a key part of an organization's money-making machine.**
- **What's stopping your business making more money? Is it capacity to deliver more work or is it demand for what you sell? Prioritize your IT work accordingly.**

because we don't have the capacity to process new work without breaking our existing service level agreements."

Brandon smiled. "So, if you could process more units each day, then you could sell more and make more money?"

"Of course."

"Let's quantify that. I'll invent numbers for the sake of illustration. Let's say that your customers pay you about \$10 per unit you fix plus the variable costs of parts. You said that you process 4,000 units a day, so your daily revenue is \$40,000. Assuming there are 250 working days in a year, then your company earns \$10 million in revenue each year. If you're barely profitable, then I assume your total costs are just under \$10 million a year, too. How's that sound?"

"Close enough."

"Good. Now, here's what I'd do if I were you. Work your way through each request in your 'pending' column and ask if it will free up any extra capacity in your factory that your sales folk can sell. If you find any—and I'm sure you will—then validate your reasoning and move it to the top of your list."

Brandon checked his watch and said that his taxi would be arriving soon.

"Hunt out any requests that will decrease the amount of administration your workers do or the amount of rework they do. Those requests are already on your board, I'm sure, but it's

just that your board is so busy you can't find them. Now, I've gotta go, otherwise I'll miss my flight."

We chatted idly in the lobby until his taxi arrived, then I went back upstairs, pulled up a chair next to the request wall, and pulled the first card from the pending column. It said, "Automate DX reports." Would that increase the capacity of our factory? Not that I could see. The next request was a small piece of work cleaning up the design of our Web site. Was it going to increase our capacity? Not likely. Nor would the next card, nor the next, nor the next.

Just under an hour later, I found a card that looked like a promising candidate for the top of our list. It was a request for a modification to our stock control system that would reduce stock outs. In other words, when one of our technicians repaired a mobile phone, about 10 percent of the time we didn't have a replacement part in our warehouse and we had to order a new part. The technician would reassemble the phone then put it aside until the replacement part arrived. Then she'd have to disassemble the phone again, replace the part, and reassemble the phone. We processed a lot of mobile phones each year. That was a lot of wasteful rework.

I fired up my spreadsheet and ran some numbers. The factory was currently making around half a million dollars profit each year. If we could reduce stock outs on mobile phone repairs by one-third—something that wasn't unreasonable—then, according to my spreadsheet, we would free up extra capacity we could sell for an extra quarter of a million dollars. I knew I'd need to verify my numbers, but it seemed likely that we could increase profits by 50 percent simply by moving that one card to the top of the list. Even better, I was only a quarter of the way through the requests. I wondered what other nuggets lay hidden in the pile. **{end}**



**How much are you currently involved in the commercial aspects of the projects you work on?**

Follow the link on the [StickyMinds.com](http://StickyMinds.com) homepage to join the conversation.

## Your Task: Drive the Nail



## Select a Tool:



Choosing a tool is easy when you know what the job requires.

BugHost has been providing affordable solutions for both **Enterprise and Small Business** for nearly 10 years. Start your free 30-day trial today to see why BugHost is the right tool for you.



**BugHost™**

- ✓ Bug Tracking
- ✓ Requirements
- ✓ Test Cases
- ✓ Task Tracking
- ✓ Free Technical Support

**THE RIGHT TOOL.  
THE RIGHT PRICE.  
THE ORIGINAL**

**BugHost™**

[www.BugHost.com](http://www.BugHost.com)


BugHost, the BugHost logo and "Seymour" the bug are trademarks of Varied Corporation.



# VIRTUAL LAB IN THE CLOUD

by Ravi Gururaj & Srihari Palanga





**T**here are two key management challenges that software engineering labs face: The bottleneck from IT operations and unconsolidated administration and lab infrastructure.

The IT administrator must respond to users' requests quickly. Since manual intervention is required when the administrator readies the infrastructure, there often is a significant wait time before software engineers gain access to the requested resources. On the other hand, IT administrators have a difficult course, because they need to prioritize the requests received as well as provision, manage, tear down, and free up resources.

It is not uncommon for developers and testers—the users of the labs—to have their server infrastructure closely guarded and self-managed. These users often operate in silos and find it difficult to share lab information and artifacts. IT administrators are faced with the uphill battle of trying to coordinate, sync, and ensure organizational compliance in the many servers used across the organization. Since there is no centralization of the lab infrastructure resources, it is difficult to drive efficiency of resource utilization.

### **Virtual Labs on the Private Cloud**

To address these challenges, IT administrators have moved toward lab server consolidation powered by virtualization. This lab consolidation is usually accompanied by a management layer called virtual lab automation (VLA). Together, they enable the lab to operate as a private, on-premises cloud.

VLA is a management approach in which the recurrent, labor-intensive manual tasks, processes, and infrastructure necessary to provision development and test labs are automated, streamlined, and centrally managed. VLA ensures rapid, highly repeatable, resource-optimized deployment of complex, multi-machine development, test, and pre-production environments across virtual machines. VLA can integrate with existing software and hardware infrastructures in order to maximize your existing investments.

On-premises VLA provides a solution to the two key management problems described above, through end-user, policy-governed self-service, and consolidated and centralized lab management.

VLA enables automation-supported, self-service lab provisioning for end-users. These virtual labs can be constrained by resource quotas and access policies for each class of end-user. End-users gain on-demand lab access to IT resources via a Web browser interface. The VLA management system ensures that no single user can monopolize or misuse the shared pool of resources.

Infrastructure administrators can use a single tool to manage across a multi-site, *multi-hypervisor* virtual farm infrastructure deployment. A hypervisor is a computer software platform that abstracts the underlying hardware and allows multiple operating systems to run on a host computer concurrently while sharing the hardware resources. This unified management view provides the infrastructure administrator with a coherent view of resource utilization across all lab sites. To a great extent, multi-hypervisor VLA management framework ensures the administrator has eliminated the risk of vendor lock in.

While VLA solves some critical management problems for virtual labs on the private cloud, there are other challenges to consider: required upfront capital expenditure, capacity planning for the peak, and in-house infrastructure administration.

On-premises virtual labs require organizations to fund the required hardware and software. In today's economic environment, it may be difficult to convince management to invest in on-premises equipment.

The on-premises virtual lab consists of a shared infrastructure that is accessible to many groups and users throughout the organization. The user demand for the infrastructure resources will vary as a function of time, making capacity planning a challenge for IT managers. The easiest solution for administrators is to plan for the peak lab requirements, which means that infrastructure would be substantially underutilized during the average and low utilization periods as shown in figure 1. This leads to inefficient use of capital resources for equipment that is not utilized optimally.

On-premises private clouds require dedicated administrators to maintain, tune, and manage the infrastructure. For example, a hardware administrator manages the hosts in the virtual lab and a software administrator manages the virtual lab instance, grants user permissions, sets up the LDAP integration and authentication, and performs other tasks.

So, while there are tremendous benefits with an on-premises solution, it may not always work due to the challenges cited above.

## Virtual Labs on the Public Cloud

Along with an on-premises infrastructure running hypervisors, VLA technologies and products also can leverage the public cloud infrastructure, which is available as infrastructure as a service (IaaS). This can address the challenges of running virtual labs on your internal, private clouds.

Two benefits come from leveraging the public cloud as the infrastructure platform for your virtual labs: transactional access to resources and abstraction of the resource view from users.

The public cloud provides users with the ability to access and manage resources (compute, storage, and networking) in a utility-style, pay-for-what-you-use mode.

The public cloud infrastructure is powered by virtualization, which abstracts underlying hardware from user

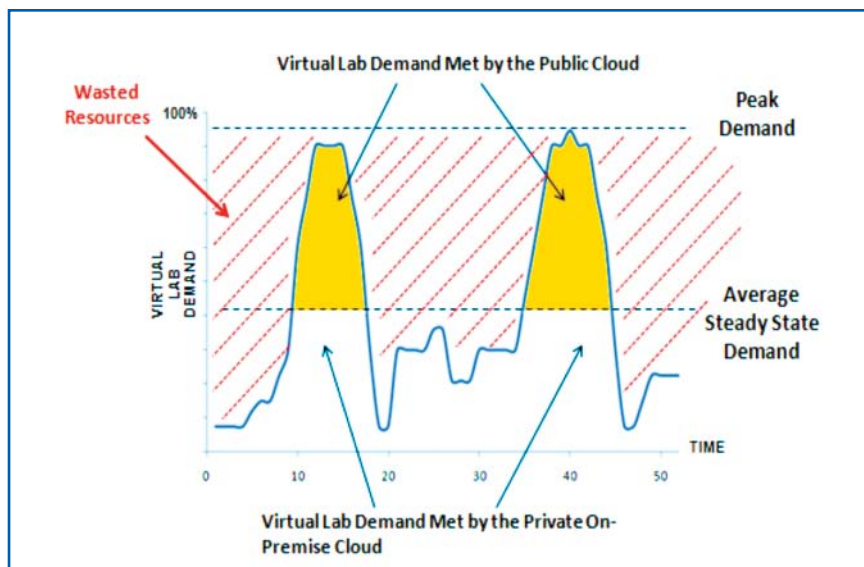


Figure 1: Hybrid lab management offers the best of both private and public cloud infrastructure

interactions. This provides users with dynamic, scalable, elastic, and graded access IT resources. The abstraction also provides the platform for increased collaboration and artifact reuse among the many users.

The ability to have your VLA management software work on public clouds provides several benefits:

**Convert capital expenditure to operational expenditure:** Your team can avoid making upfront investment and capital expenditure on hardware and software to run the virtual lab. Instead, users can leverage the pay-as-you-go operational model of the public cloud.

**Let the IaaS vendor handle the infrastructure administration:** Your team does not need to rely on an administrator to manage and maintain the hardware and software in the lab. Instead, the infrastructure is provided as a service and is associated with specific service-level agreements to meet your virtual lab requirements.

**Pay as you go:** Shifting to the public cloud provides tremendous economic flexibility and the ability to pay only for resources that you use. This flexibility helps the engineering team manager control and cap operational costs.

When using the public cloud, concerns of security and compliance may arise. In such cases, users can look at hybrid VLA solutions that allow you to manage virtual labs over both private, on-premises infrastructure, which is typically more secure and under tighter compliance

norms, and public clouds, which give you a more flexible operational model. As shown in figure 1, administrators can design the on-premises lab to handle average steady-state lab demand and, for all requirements over the average, users can “burst” to use the resources in the public cloud. Vendors are now building virtual lab management solutions to handle seamless management over both public and private clouds. This use of both public and private clouds has economic benefits. Customers no longer need to build and plan for peak capacities and risk ending up with a lot of underutilized capacity on premises.

## Engineering Implications and Benefits

As discussed above, virtual labs can be enabled on private as well as public clouds. Once deployed and adopted, how do these virtual labs help the development, build, and test processes? Let's examine each of these in some detail.

### SOFTWARE DEVELOPMENT

**Provision, manage, and tear down multi-machine configurations quickly:** In a virtual lab, multi-machine configurations (think n-tier configuration test beds for your application) that model production-like environments can be created. This provides networking capabilities to connect the various virtual machines in the configuration.

**Network isolation (IPZone):** Engineers can deploy and redeploy a con-





**A virtual lab in the cloud provides the ability to spawn pristine virtual infrastructure with minimal wait times. Software can be compatibility tested in these environments and certified against myriad software system requirements.**



figuration without worrying about the IP or MAC address conflicts between the various deployed instances. The capability to IPZone a configuration is tremendously valuable. For example, a tester can hand off to development a configuration snapshot capturing a bug and then continue testing. Development engineers can use the saved configuration without causing any interruptions or conflicts with the testing efforts.

**Virtual desktop infrastructure environments and consistent development environments:** Virtual labs can be configured to provide developers access to standard machine configurations with the appropriate software and stack configured on the machine. This ensures that all your developers have access to consistent development environments. Furthermore, developers have the ability to capture, save, and back up the virtual machine with ease.

**Commercial software licensed in virtual machines:** Several large independent software vendors like IBM, Microsoft, and Oracle have started to offer their software programs and packages as part of standard virtual machines in the public cloud. For example, Amazon Web Services offers special Amazon Machine Images (AMIs) preconfigured with IBM, Microsoft, Oracle, and other software. These AMIs are priced on a per-hour usage basis, and developers and testers can use them in their development and test environments without needing to purchase the expensive full software license.

**Outsourced, partner-controlled access:** Virtual labs are accessible across the globe via a Web browser. Users and teams can be set up with appropriate policies, quotas, and specific persona permissions. Now your development team, test team, and external partners, working from different parts of the globe, can share artifacts such as scripts, licenses, and image

templates, as well as collaborate on the software engineering project.

#### SOFTWARE BUILD

**Virtual labs can spin up pristine build environments:** The build process in software engineering requires access to a pristine environment. A virtual lab in the cloud lets users use automation to spin up a pristine machine. A typical scenario involves the powering on of an instance of a build virtual machine from the library, connecting to the source code repository, downloading the latest stamped source code, executing the build commands in the virtual machine, and outputting the latest build files. If required, these build files can be transferred out of the virtual machine (to a common file server, for instance) and then powered off or discarded.

**Virtual labs can drive increased levels of automation:** Agile methodologies and continuous integration (CI) are powerful process methodologies. Virtual labs can complement the CI workflow process. For example, if a CI build needs to run on a certain platform and no virtual machine image exists that matches the requirements, users can automate the spawning of a new virtual machine, even saving it for future use if required. This new, spawned virtual infrastructure can execute the CI build, trigger the set of automated tests to be run on the latest build, and transfer the results of the test run to the results repository. Once the CI run and test execution are complete, the virtual infrastructure in the cloud can be torn down to free up the resources.

#### SOFTWARE TESTING

**Compatibility testing:** Today, software needs to be tested on many different platforms. A virtual lab in the cloud provides the ability to spawn pristine virtual infrastructure with minimal

wait times. Software can be compatibility tested in these environments and certified against myriad software system requirements. The alternative to this approach is to wait for your in-house IT administrator to provision and set up the software environments for each of the configurations in the compatibility test matrix, something that is time and cost prohibitive.

**Test repeatability and avoiding “no-repro” bugs:** Software engineers are constantly faced with the no-repro bug, where development is unable to reproduce the bug encountered by software testing or found through the use of the software in the field. These bugs are unattended to or, in the worst case, closed because they cannot be reproduced. Virtual labs in the cloud provide two key capabilities to help in this scenario: Testers can suspend, snapshot, or capture the test environment configuration as the defect occurs, which will help the developers gain easy access to an environment where the bug can be reproduced. And, testers and developers can repeat the sequence and introduce predictability for test runs—starting with a clean base OS image, installing or customizing the necessary software stack environment, installing the version of the developed software for testing, and repeating the series of steps for the tests.

**Scalability tests:** Virtual labs in the cloud help testers create test beds for large and massive scalability tests. Creating a test environment that flexes the software’s scalability aspects can be done best with virtual lab infrastructure that allows testers to spawn up, grow, and then throttle down on the test bed environment.

**Centralized virtual labs enable user sharing and collaboration:** Virtual labs in the cloud are a great asset for testing staff and teams when there is a need to



**The gain in engineering cycle time is a key business benefit.**  
**Anecdotal evidence suggests that customers can reduce the provisioning time by as much as 80 percent.**



reuse, automate, collaborate, and share various lab artifacts like virtual machine templates, scripts, licenses, and ISOs. The centralized management and operations enable user and team management with easy sharing and collaboration. For example, testers can share entire environment configurations with developers.

**Test environments for the manual tester:** Manual testers often require access to pristine, multi-machine test environments. With virtual labs in the cloud, testers can not only deploy but also design custom virtual machine environments in minutes via a Web interface that is used to manage virtual labs in the cloud.

### **Business Value and Implications**

As seen above, virtual labs in the cloud offer tremendous benefits from an engineering standpoint. Let's examine the benefits of the management capabilities and infrastructure from a business value standpoint.

**Eliminate provisioning bottlenecks and accelerate software time to market:** Environment provisioning, re-provisioning, and waiting for the environment availability are critical blocking factors for smooth and quick development and testing cycles. In traditional physical environments, the provisioning takes eons and blocks users on key tasks in the project plan. With virtual labs in the cloud, your testers, developers, and external partners have self-service access to infrastructure and software with complete policy, quota, and lease governance controls. This access to virtual labs ensures that engineering staff members have access to the required resources when they need them and how they need them. The gain in engineering cycle time is a key business benefit. Anecdotal evidence suggests that customers can reduce the provisioning time by as much as 80 percent.

**Increase test matrix coverage to improve software quality:** Catching bugs early is a key goal for every software engineering effort. Bugs discovered late in the testing cycle or, worse, bugs found when software is deployed in the field, are very expensive for the business. Virtual labs in the cloud help advance the test matrix coverage. For example, more tests can be run during every unit, release, system, or regression set of tests. The increased test matrix coverage guarantees improved software quality since it helps bring the field or production environments into the software engineering cycle and reduces the risk of discovering latent software deficiencies after release. Anecdotally, virtual labs in the cloud reduce by as much as 95 percent the time required to reproduce bugs and provision environments.

**Manage infrastructure and improve cost control:** A virtual lab in the cloud is a resource that is used by multiple software development engineers and teams. The costs of this resource can be shared between the many business units or engineering managers within and outside the organization, leveraging it during their software development and test efforts. Virtual labs provide management capabilities to enable lab access and audit trails, and they control and allocate costs internally to the various units or engineers accessing and leveraging the virtual labs.

**Improved worker productivity:** Virtual labs in the cloud enable powerful automation in terms of both policy-governed self-service of virtual machine environments and automation of operations within the guest virtual machines. This powerful automation capability helps increase worker productivity—workers now have the ability to refocus their efforts on strategic, higher-value-add activities.

**Offer tiered access to shared resources for your workers:** The shared infrastructure resource can be divvied up with different service-level agreements for different teams and users accessing the resources. For example, testers involved in the release of a product require higher-priority access to the resource than do developers and testers conducting unit tests or system tests while working on the next major version of the software. This management capability when overlaid with the policy-governed, self-service, shared virtual lab in the cloud makes it compelling for the business—it can now unleash its users to the virtual lab in the cloud, knowing that they have access to all the benefits with little to no downside.

Cloud computing is gaining mind-share and importance for IT in small, medium, and large businesses. Organizations are looking at both private and public cloud infrastructures to tackle their acute lab infrastructure operational issues. Virtual labs on private or public cloud infrastructures provide powerful infrastructure solutions to the operational issues, including the ability to run a policy-governed, self-service virtual lab and to drive consolidation and centralization in the lab. Virtual labs in the cloud provide both engineering and business benefits. The key engineering benefits include improved development, build, and test. Virtual labs in the cloud provide business justification by accelerating software time to market and improving software quality, cost control, and worker productivity. **{end}**

# BETTER SOFTWARE CONFERENCE

June 6-11, 2010  
Las Vegas, NV

[www.sqe.com/bsc](http://www.sqe.com/bsc)

REGISTER BY APRIL 9, 2010 AND

**SAVE UP TO \$400!**

GROUPS OF 2 SAVE EVEN MORE!

## Choose from a full week of learning

### SUNDAY

Multi-day Training Classes Begin

### MONDAY-TUESDAY

38 In-depth Tutorials in Half- and Full-day Formats,  
Business Analyst Workshop

### WEDNESDAY-THURSDAY

4 Keynotes, 24 Concurrent Sessions, EXPO, Reception,  
Bonus Sessions, and More

### FRIDAY

Agile Leadership Summit

## SPECIAL FOR 2010

Your conference registration

includes full access to

**Agile Development  
Practices | West**





# OFFER APPRECIATION

SIMPLE EXERCISE, POWERFUL RESULTS

by Linda Rising

# APPRECIATIONS

In his book, *Project Retrospectives*, Norm Kerth describes a simple exercise called Offer Appreciations. When he first told me about it, I thought it might be a good experiment, since I was just learning about retrospectives. However, way back in the mid-'90s, my focus was on mining best practices from our agile development projects, so I didn't get excited about the exercise. It seemed a little too "fluffy" for me, and it didn't hold much promise for capturing pattern insights. It took years of experience with this exercise before I finally saw what powerful results it produced.

In the exercise, team members sit in a circle so everyone can see everyone else. The exercise uses a protocol: Person A says to Person B, "B, I just want to say thanks for [describe something that B did for the team]." B can only reply with "You're welcome" or say nothing (a common response). I typically demonstrate the protocol by making up something and "appreciating" someone in the group, and then I remove myself from the circle to avoid having the team members tell me about what happened. It's interesting that this tendency is so strong, especially in technical people. It's difficult to look someone in the eye and say what we are feeling.

Initially, I thought that teams would like the exercise. It's always good to recognize accomplishments; it makes people feel better.

Then, slowly, over time, with many different teams, in many different organizations, I began to notice things. Teams that had been dysfunctional, with team members who were flippant about everyone and everything, late to the meeting, making jokes (even though I have guidelines about that), and sitting together in little sub-groups—such that I had begun to despair that nothing useful would come out of the experience—began to get close, look at one another in a different way, smile, cry (yep, I've seen it), and be unable to finish a sentence because of rising emotion.

At first, I thought that what I was seeing was an anomaly. I made excuses instead of learning from it. In fact, what I saw was that, as a result of doing Offer Appreciations, things got better.

Here are some specific examples. The day started off with half of the team arriving very late. When the tardy members showed up, it was clear that they were the younger, less experienced members of the team and that they knew they hadn't accomplished as much as they had hoped. They weren't failures, but since it was their first assignment on their first job, they had wished for success—and not just success but a shining, startling success that they could hold up through their careers and that would keep them going.

Instead, their project had failed and they didn't know what to do with that failure. So they made a lot of jokes and perhaps thought, "If I don't take this too seriously, then it can't really hurt me."

Progress during the retrospective was painfully slow, so it was more out of desperation than anything else that I thought about Offer Appreciations. I almost didn't do it because I thought they would end up poking fun at each other and at the exercise, which would just make things worse. When I suggested that team members sit in a circle so they could see each other, they began to make faces and didn't show any signs of settling down. I gave my example of the protocol and then stepped aside, not expecting much. The appreciations began immediately.

One of the young upstarts said to one of the older veterans, "When I came on the team, you were great about helping me get started. I was fresh out of school and thought I knew a lot, but I got buried right away and you helped me. You didn't laugh at me or make fun of my mistakes. Thanks for that." I was floored. I could hardly move. I found I wasn't breathing properly. I waited to see what would happen next.

The appreciations went on for twenty minutes. This team had so much pent-up stuff to get out. This was the first time I had seen tears in this exercise. One of the newbies started to say something and couldn't finish. I stepped in and said, "We can come back to you. Are there other appreciations?" And he did recover. And he added his voice to the chorus. What a song. I can still hear it when I think back to that time; it forever changed that exercise for me.



Another instance: Some time later I was helping a team through a retrospective. The team included a really old guy (my age!) who came in with everyone else but sat by himself in the corner. The company provided a really nice catered lunch, but he left the room to eat the lunch he had brought with him. He would not participate in any of the exercises, and I simply let him be. I finally began to think I might try Offer Appreciations, just to see what would happen. He didn't join the circle at first, but after people had been expressing appreciations for a few minutes, he came over. At the next pause, he stood up, looked around the circle, said, "Thanks for putting up with me," and sat down. He was fine after that. He joined in, talked, participated with the others. Again, I was stunned. What was going on?

Over time and after seeing so many examples of this magic, here's what I have concluded. When we become part of an organization and join a team for the duration of a project, we typically are cast in a role. Sometimes we have contributed to the definition of this role.

We're the Java guy or the database guy or the old guy or the new guy. But sometimes the role is thrust upon us and, even if we don't like the characterization, we step up. We may not be happy about the role, but we don't know how to get out. During retrospectives, especially during Offer Appreciations, we have a chance to put aside that role. We can become the person we want to be. We can stop the jokes or the bad behavior. There hasn't been a way to do that in the past. Even if we have wanted in the deepest way to get off the train, there hasn't been a way. Now it's offered, just by sitting in the circle and saying how much we appreciate what others have done.

Psychologists tell us that the best kind of appreciation is specific—the more detail about what was contributed, the better. Instead of saying, "Thanks for everything you've done," say, "Thanks for spending all weekend working on that database problem. If you hadn't done that, we wouldn't have been ready for the customer demo on Monday morning. You made a big difference in how the customer saw our next release."

We also know that the person who expresses gratitude benefits as much as—and perhaps more than—the person who receives the thanks.

Research has shown that when we say something to another person—an appreciation of their contribution, for example—our brains are listening and thinking, "Oh, I'm saying this to Fred. I must really believe that he has done a lot for our team, and I'm honestly grateful for that." When everyone does that, it changes the character of the team. Team members end the exercise with brains more attuned to how well they all contributed and how important they all are. Teams move up to a higher plane after an experience like that.

I'm guessing that you think I've gone over to the "fluffy" side, but here's the really interesting part. The fluffy side isn't so fluffy anymore. Results can actually be seen on MRI scans. It's the real reason I like investigating these strange results. It's as technical as the most technical piece of anything we do and, in fact, it may be the foundation for everything. **{end}**

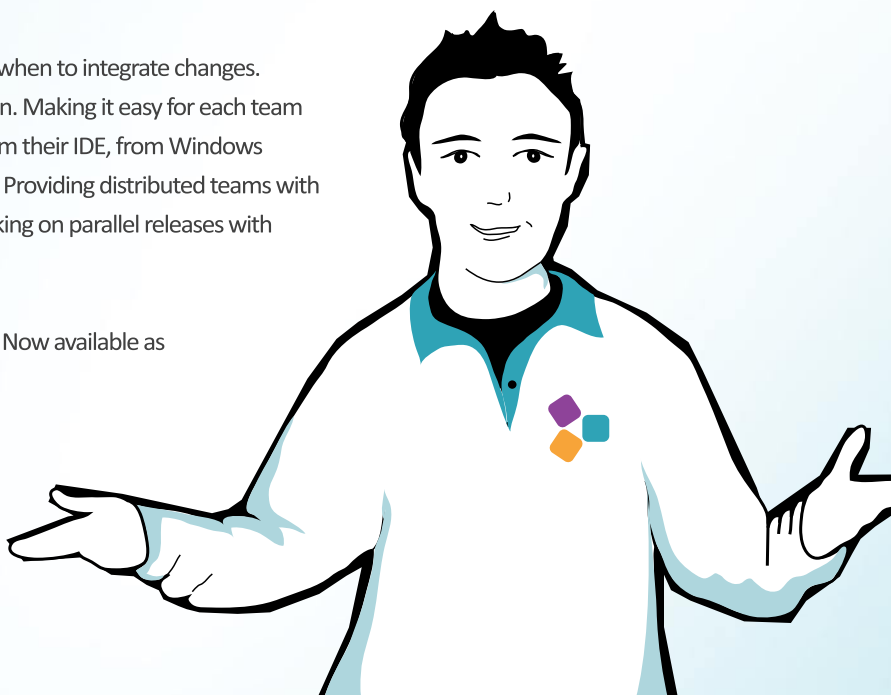
## Source control can be much more than just checkout and checkin.

Get your **FREE** trial now at [purecm.com](http://purecm.com)

Being able to respond to change by deciding when to integrate changes. Improving quality with Continuous Integration. Making it easy for each team member to access the same project data: from their IDE, from Windows Explorer or from their Mac or Linux machine. Providing distributed teams with secure but fast access and having teams working on parallel releases with minimum overhead.

**PureCM – SCM that grows with your needs.** Now available as Standard and Professional edition.

 **PureCM** [purecm.com](http://purecm.com)







June 6-11, 2010  
Las Vegas, NV  
[www.sqe.com/adpwest](http://www.sqe.com/adpwest)



REGISTER BY APRIL 9, 2010 AND  
**SAVE UP TO \$400!**  
GROUPS OF 2 SAVE EVEN MORE!

**Choose from a full week of learning**

**SUNDAY**

Multi-day Training Classes Begin, Bonus Session: Agile 101

**MONDAY-TUESDAY**

38 In-depth Tutorials in Half- and Full-day Formats

**WEDNESDAY-THURSDAY**

4 Keynotes, 24 Concurrent Sessions, EXPO, Receptions,  
Bonus Sessions, and More

**FRIDAY**

Agile Leadership Summit

**SPECIAL FOR 2010**

Your conference registration  
includes full access to the  
**Better Software  
Conference**



100% OF 2009 ATTENDEES RECOMMEND THE AGILE DEVELOPMENT PRACTICES CONFERENCE



# CrowdsourCe Software Testing

## Six Ways a Virtual Team Complements In-house Testing



by Doron Reuveni





**T**EST TEAMS are stretched beyond their limits as leaders are asked to keep their applications in great shape despite shrinking budgets and tighter launch deadlines driven by agile development and fluid product roadmaps.

While test managers are trying to overcome these obstacles, they are also expected to achieve test coverage that matches the complexity of their users and their applications across multiple locations, languages, operating systems, browsers, and equipment.

This is enough to make even the top test leaders feel like the deck is stacked against them—that all their efforts are merely delaying the inevitable crisis.

In response to these mounting challenges, crowdsourced software testing is a growing trend. By leveraging a global community of professional testers, test teams are overcoming their obstacles and maintaining application quality, achieving broad test coverage, meeting launch dates, and working within tighter budgets. Here are the basic steps:

1. Test teams specify their test requirements by application type, location, OS, browser, etc.
2. Test teams upload specifications, test scripts, test cases, etc., through a secure platform.
3. A virtual test team is selected and invited to join the project.
4. The virtual test team begins testing. Bugs are reported in real time and evaluated by the in-house team.
5. The company pays only for the test cycles that it uses—no long-term commitments or paying for down time.

The net effect is that test managers get instant access to a global community of testers through a platform that enables management of full testing cycles. This allows real-world testing of an application to help ensure that it works as well “in the wild” as it does in the lab. Crowdsourced testing can scale up or down; it functions as an on-demand extension of your existing test team.

What follows are six examples of how crowdsourcing complements in-house test teams.

## 1. MAINTAIN CONTROL

One of the greatest concerns with traditional outsourcing is a loss of control and, thus, quality. But with crowdsourcing, the test manager maintains complete control and visibility through the entire test cycle.

In fact, companies that use crowdsourcing understand that effective, detailed communication and project management are critical to managing the crowd successfully. While you don’t have to micro-manage the crowd in terms of tactical execution and idea generation, strong management enables the processes, plans, and deadlines to remain firm.

While there are many sites that connect employers with freelance workers, most of these sites do not provide structured community building but function only as an online employment agency. Crowdsourcing is unique in that it encourages strong management and participation from the company’s in-house resources.

## 2. TEST COVERAGE

Unless your application is designed for a simple and homogenous audience that is identical to your in-house test team, it’s likely that you have gaps in your test coverage. Yet, filling these voids—whether they’re related to browser, OS, device, language, or location—would be prohibitively expensive, impractical, and an enormous commitment of time and resources.

With crowdsourcing, this is no longer the case. Having already assembled a global testing community, crowdsourcing enables test teams of all sizes to target specific users for specific testing assignments, such as Mac users in Germany or Verizon BlackBerry users in the US.

Previously, even the largest software companies could not afford to have their products universally tested. Now, even early-phase startups can’t afford not to.

## 3. INCREASED APPLICATION QUALITY

Today, customers expect applications to be error free and fully functional from day one. “Good enough” is no longer an option.



Take, for example, the evolving meaning of “beta.” Beta used to mean an early release of a software version, before the bugs had been worked out. The meaning is now almost entirely business driven: a stable, first release of an application, before the precise business model has been set in stone. Simply put, Web and mobile application companies often don’t have the luxury of providing two releases to customers—one with bugs and a later one without.

But how can companies be sure they are getting high-quality testers from a crowdsourced model? The answer can be found by examining the two types of currency in an online community: money and reputation. Of course, money serves as a primary motivator, but the transparency and accountability of crowdsourcing motivates testers to build strong reputations. This ensures that a test manager is getting the top testers who have the right motivation to perform quality testing services.

## 4. TESTER DIVERSITY

Not only does the in-house test manager maintain complete authority over release cycles, but he also decides which testers will be invited to participate in the test cycles. And, as an application evolves, the virtual test team can change with it. An ideal crowdsourced test community offers access to a wide range of testers across locations, languages, technical platforms (hardware, operating system, browser, anti-virus, etc.), application-type expertise (mobile vs. Web vs. desktop), industry knowledge and expertise, and experience levels.

For most organizations, this is prohibitively expensive to simulate in house or with outsourced firms. Also, when dealing with scope or direction changes in the product pipeline, outsourced test firms struggle to adapt. When the scope of testing begins to deviate from the original vision, the outsourcing contract often breaks down. This can make it difficult for outsourcing firms to keep up with your evolving testing needs.

Since crowdsourcing is based on an on-demand model, companies can alter their test requirements at a moment’s notice. And, because the crowdsourced community already has a wide range of

software testing expertise—with thousands of testers across the globe—it can easily accommodate changes without additional costs or delays.

## 5. EFFICIENCY AND EASE OF USE

Since it is an on-demand solution that scales up and down instantly, crowdsourcing helps alleviate the pains associated with short release times. This is especially true of those adhering to agile methodologies. Leveraging a community of testers exactly when you need it can ensure that resources are neither overworked nor underutilized at any point in the product development lifecycle. You can scale from no testers to hundreds in a matter of hours and run as many test cycles as your business requires, whether it’s one or one hundred or more.

The efficiency of any test department is often a good indicator of the efficiency of the business as a whole. By smoothing over peak workloads to achieve faster time to market, everyone reaps the benefits. Vendors are free to pursue new revenue opportunities, the sales team enjoys a higher-quality product to pitch, and technical support is no longer overburdened with a faulty product. In short, an efficient test process lends itself to success in other areas.

## 6. COST CONTAINMENT

Companies pay too much for outsourced testing services. Resources are often misallocated or money is spent on services that aren’t fully utilized.

Discovering defects before your users do has never been more important to a company’s bottom line. In today’s world of pay-as-you-go products, such as mobile apps or software-as-a-service Web apps, any bugs that affect your customers will hurt usage, dragging revenue and your reputation down with it. Even for standard license-based applications, long evaluation cycles mean bugs are often found before the purchase decision and can diminish your reputation and sales.

As an on-demand model, crowdsourcing enables software companies to pay only for the test cycles they need, with no long-term contracts, out-of-scope work, or hidden fees. {end}

### CASE STUDY: GAZELLE FINDS SOLUTION IN CROWDSOURCED SOFTWARE TESTING

As the operator of a “re-commerce” site where people can sell and recycle their old consumer electronics, Gazelle ([www.gazelle.com](http://www.gazelle.com)) is keeping its promise to change the world “one cell phone, one laptop, one iPod at a time.” As Gazelle’s business and software development expanded, CTO James McElhiney realized that his test team—through no fault of its own—was not keeping up with the fast pace of development, and he started looking for a more agile testing solution.

“Keeping up is a common problem within agile shops,” James said. “And the answer has never been easy to come by.” James understood that with the increased flexibility of agile development, software testing had to play an active role throughout the process, not just a day before launch. After debating whether to hire internally or sign an outsourcing contract, James finally made his decision: neither.

Having learned of crowdsourced software testing through an associate, James signed up to see how agile the global community really was. Within a matter of hours, he had assembled a diverse team of software testing professionals for functional and exploratory testing and received a detailed bug report on Gazelle’s latest Web application. It wasn’t long after the first release that James (and the newly hired test manager) realized they had found a quick, accurate solution to their agile testing challenges.

“Crowdsourced software testing works really well with the fast pace of agile. We never lose a step, since we release when we leave for the weekend and results are waiting for us when we come back in on Monday.”

### Insight Pro

BURLINGTON, MA—Klocwork, Inc. has announced the release of Klocwork Insight Pro, a new suite of developer tools aimed at maintaining high velocity throughout the software development process. Klocwork Insight Pro introduces three new tools designed to allow development organizations to achieve greater iteration velocity while reducing the risk of bug debt.

- **Continuous static analysis:** This on-the-fly analysis provides developers with immediate visibility into errors being made or vulnerabilities being left open.
- **Collaborative peer code reviews:** Klocwork Insight Pro changes the model of traditional, in-person, or scheduled code reviews with a collaborative, peer-based tool that facilitates simple pre- and post-check-in reviews.
- **Automated code refactoring:** Using automated tools, developers can modify their code toward overall patterns to achieve clean, easy-to-understand, and

more maintainable code designs without changing the code's function in any way.

Visit [www.klocwork.com](http://www.klocwork.com) for additional information.

### GUIDancer 3.2

GERMANY—Bredex GmbH has released *GUIDancer* version 3.2. Version 3.2 contains a variety of new supported test actions, increasing the amount of tests that can be automated out of the box. Using the library of *GUIDancer* actions, testers can create modular tests simply by dragging and dropping the required actions.

Version 3.2 contains expansions to this library, increasing the tests that can be written for components such as tabbed panes, tables, and context menus. Using *GUIDancer* actions requires no knowledge of the inner workings of an application. A variety of checks and synchronization actions are available alongside other flexible actions to automatically test applications through the GUI.

Visit [www.bredexsw.com](http://www.bredexsw.com) for information.

### Load Tester 4

DURHAM, NC—Web Performance, Inc. has announced the release of Load Tester version 4.0. Load Tester 4 gives users access to the cloud network to let developers conduct performance tests outside their own networks and simulate greater numbers of potential site visitors.

Unlike most Web-based solutions, Load Tester 4 can handle even the most complex Web sites, including often used variables such as session tracking, VIEWSTATES, and data customization, and is ideally suited for performance testing throughout a site's development cycle.

Load Tester 4 now also simulates the latest versions of Internet Explorer and Firefox, both of which have increased the number of simultaneous socket connections that place a higher load on Web servers and reduce Web server capacity by up to 60 percent.

Visit [webperformanceinc.com](http://webperformanceinc.com) for more information.



### What Can a PowerPass Membership do for You?

- Discounts on SQE conferences and SQE Training events
- Keyword searchable access to magazine and conference proceedings archives
- Keyword searchable access to SQE published books:  
*The Web Testing Handbook*, *Systematic Software Testing*, and  
*A Practitioner's Guide to Software Test Design*

[www.stickyminds.com/powerpass](http://www.stickyminds.com/powerpass)





# Virtual Taskboards for Agile Teams

- Real-time collaboration
- Instant updates

Sign up free at  
**SeeNowDo.com**





# SOFTWARE TESTING ANALYSIS & REVIEW

# 2010



**STAR  
EAST**



THE GREATEST SOFTWARE TESTING CONFERENCE IN THE UNIVERSE (WE THINK!)

APRIL 25-30, 2010  
ORLANDO, FLORIDA  
ROSEN SHINGLE CREEK



**REGISTER BY FEBRUARY 26, 2010  
AND SAVE UP TO \$400.  
GROUPS OF 2 SAVE EVEN MORE!**

[www.sqe.com/stareast](http://www.sqe.com/stareast)

**Choose from a full week of  
learning, networking, and more**

**SUNDAY**

Software Tester Certification—Foundation Level  
Training (3 days), Using *Visual Studio® 2010 Ultimate*  
to Improve Software Quality (3 days)

**MONDAY-TUESDAY**

24 In-depth half- and full-day tutorials

**WEDNESDAY-THURSDAY**

5 Keynotes, 35 Concurrent Sessions, EXPO, Networking  
Events, Receptions, Bonus Sessions, and more

**FRIDAY**

Testing & Quality Leadership Summit



# BUILD YOUR CONFERENCE!

Conference schedule includes training classes, tutorials, keynote presentations, concurrent sessions, summit sessions, and more!

**STAR  
EAST**

## SUNDAY

Software Tester Certification—Foundation Level Training (3 days)  
Using *Visual Studio® 2010 Ultimate* to Improve Software Quality (3 days)  
Bonus Session—Assessing Your Readiness for the ISTQB® Foundation Exam

## MONDAY – TUESDAY

24 In-depth half- and full-day tutorials



### Popular Tutorials Include:

Becoming an Influential Test Team Leader  
Key Test Design Techniques  
Becoming a Trusted Advisor to Senior Management  
Exploratory Software Testing Interactive  
A Test Leader's Guide to Going Agile

Measurement and Metrics for Test Managers  
Test Automation: The Smart Way  
Essential Test Management and Planning  
Planning Your Agile Testing: A Practical Guide  
Making Test Automation Work in Agile Projects  
Reliable Test Effort Estimation

## WEDNESDAY – THURSDAY

5 Keynote Presentations  
35 Concurrent Sessions  
Networking EXPO  
Bonus Sessions  
Receptions  
and More!



Covering  
topics like:

Test Management  
Test Techniques  
Agile Testing  
Personal Excellence

Testing Mobile Apps  
Performance Testing  
Testing RIA/AJAX  
Security

Test Automation  
Virtualization  
Testing Web 2.0  
...And Much More

## VISIT THE EXPO!

*Visit Top Industry Providers Offering  
the Latest in Testing Solutions*

**TOOLS • SERVICES • TECHNIQUES • DEMOS**

[www.sqe.com/stareast](http://www.sqe.com/stareast)



**REGISTER EARLY AND SAVE UP TO \$400!**

# KEYNOTES BY INTERNATIONAL EXPERTS



## **You Can't Test Quality into Your Systems**

*Jeff Payne, Coveros, Inc.*



## **The Buccaneer Tester: Winning Your Reputation**

*James Bach, Satisfice, Inc.*



## **Agile Testing: Uncertainty, Risk, and How It All Works**

*Elisabeth Hendrickson, Quality Tree Software, Inc.*



## **Lessons Learned from 20,000 Testers on the Open Source Mozilla Project**

*Tim Riley, Mozilla Corporation*



## **Stop Guessing About How Customers Use Your Software**

*Alan Page, Microsoft*

**"WONDERFUL, FABULOUS,  
AND EXTREMELY  
EDUCATIONAL."**

*— Denise Cormier, BA*

## FRIDAY

### **Testing & Quality Leadership Summit**

Add a fifth day to your conference event and attend the Testing & Quality Leadership Summit Thursday evening and Friday. Join senior leaders from the industry to gain new perspectives and share ideas on today's software testing issues.



### **Navigating Rough Waters**

*Jane Fraser, QA Director, Electronic Arts*

### **Systematic Innovation**

*Miles Lewitt, VP Advanced Technology, Intuit*

### **The Dirty Little Secret of Business**

*Andy Kaufman, Institute for Leadership Excellence & Development, Inc.*

### **Testing Quality vs. Productivity: A View from the Trenches**

*Goranka Bjedov, Senior Test Engineer, Google*

**[www.sqe.com/stareast](http://www.sqe.com/stareast)**



**REGISTER EARLY AND SAVE UP TO \$400!**



# WAYS TO SAVE ON YOUR CONFERENCE REGISTRATION



## Super Early Bird Offer

Receive up to \$400 off the regular conference registration fees if payment is received on or before February 26, 2010.

## Buy One Get One Half Off

Register two people at the same time and save half off the second registration. The 50% savings will be taken off the lower of the two registration amounts. To take advantage of this offer, please call the Client Support Group at 888.268.8770 or 904.278.0524 or email them at [sqinfo@sqe.com](mailto:sqinfo@sqe.com) and reference promo code BOGO.

## Groups of 3 or More Save 25%

Register a group of three or more at the same time and save 25% off each registration. To take advantage of this offer, please call the Client Support Group at 888.268.8770 or 904.278.0524 or email them at [sqinfo@sqe.com](mailto:sqinfo@sqe.com) and reference promo code GRP3.

## PowerPass Discount

PowerPass holders receive an additional \$100 off their registration fee.

## Alumni Discount

STAREAST alumni receive up to an additional \$200 discount off their registration fee.

## Software Tester Certification— Foundation Level Training + Conference

Attend the Software Tester Certification—Foundation Level Training training course and the conference and save an additional \$500.

## Using Visual Studio® 2010 Ultimate to Improve Software Quality + Conference

Attend the Using Visual Studio® 2010 Ultimate to Improve Software Quality and the conference and save an additional \$500.

*Please Note—We will always provide the highest possible discount and allow you to use the two largest discounts that apply to your registration.*



## THE EXPO April 28–29, 2010

### Visit Top Industry Providers Offering the Latest in Testing Solutions

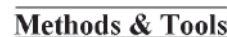
Looking for answers? Take time to explore this one-of-a-kind EXPO, designed to bring you the latest solutions in testing technologies, software, and tools. To support your software testing efforts, participate in technical presentations and demonstrations conducted throughout the EXPO. Meet one-on-one with representatives from some of today's most progressive and innovative organizations.

For Sponsor/Exhibitor news and updates, visit [www.sqe.com/STAREAST](http://www.sqe.com/STAREAST).

#### Industry Sponsors:



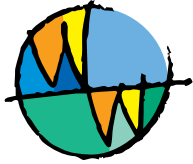
#### Media Sponsors:



[www.sqe.com/stareast](http://www.sqe.com/stareast)



REGISTER EARLY AND SAVE UP TO \$400!



## **WORLDWARE** CONFERENCE

**Santa Clara, California**  
**March 16-18, 2010**

### **Advisory Board**

Adam Asnes, Lingoport  
Manish Bhargava, Google, Inc.  
Loïc Dufresne de Virel, Intel  
Mike Hedley, Microsoft Corporation  
Gary Lefman, Cisco Systems  
Ken Lunde, Adobe Systems Incorporated  
Mike McKenna, Yahoo! Inc.  
Henry Meinig, Lionbridge Technologies, Inc.  
Florian Sachse, SDL Passolo

# EXPAND YOUR MARKETS

## Global Software Strategies

### The strategy and business case for the delivery of world-ready products

#### **Who should attend?**

Anyone responsible for setting the strategic direction of product development such as

- technically inclined strategic decision-makers
- product and marketing managers
- development directors
- globalization managers
- software architects
- CTOs

#### **Why attend?**

People who attend the Worldware Conference will

- understand the benefits and challenges of proactive internationalization
- learn from subject matter experts and interact with peer high-level decision-makers
- gain insight into the success strategies implemented by leading international software companies
- see how internationalization bridges the gap between globalization and localization
- acquire a better understanding of the business strategy for internationalization
- benefit from the experiences of some of the most successful companies in the world

For more information, visit us online at  
**[www.worldwareconference.com](http://www.worldwareconference.com)**

# 1 Things You Might Not Know About

## Estimating Goals and Deadlines

by Tim Lister

- 1 **THE DEADLINE IS NOT THE ESTIMATE.** Ninety-nine percent of the time, the deadline is set before we have even agreed exactly what we are building. The deadline is not even a goal; it is a constraint. Interpret the deadline as “We need delivery of something reasonably useful by this date.” Every estimate is compared to the deadline, making estimating good news or bad news. We need to make estimating accurate news.
- 2 **RARELY IS A DEADLINE A TRUE DEADLINE.** A real deadline is a date on which, if missed, the deliverable’s value goes to something at or near zero. Most deadlines are “hope-lines”; we really hope you can deliver by this date, but if you are a little bit late, or a big bit late, we’ll still take delivery. We’ll be grumpy, but we need to take it.
- 3 **WHEN THE GOAL IS A DELIVERY DATE, THERE ARE ALWAYS UNSTATED, ASSUMED GOALS LURKING IN THE SHADOWS.** And lurking, unstated, assumed goals are very, very bad. What are people assuming about the minimum acceptable functionality? How about the acceptable residual defects? What about the time and cost for training users? What constitutes acceptable system performance? You get the idea.
- 4 **GOOD ESTIMATES ARE BAD GOALS.** My definition of an estimate is an informed best guess at the most likely outcome. A good goal is a clear statement of a desirable, but not highly likely, outcome. We stretch to reach goals; nobody has ever stretched to make a good estimate.
- 5 **WHEN ESTIMATING, IF YOU ALLOW YOUR PRECISION TO BE GREATER THAN YOUR ACCURACY, EITHER YOU ARE A LIAR OR A FOOL. TAKE YOUR PICK.** Giving a single estimate allows the receiver to assume the precision. You say, “We’ll be done in a year, boss.” What you really need to say is, “No way should you expect delivery before October 2010. We have a good shot at delivering before the end of 2010, but I must tell you that delivery could be as late as the end of April 2011.”
- 6 **DON’T JUST ESTIMATE WHEN YOUR PROJECT LIFECYCLE SAYS YOU MUST.** Estimate whenever you get the feeling that the standing estimate is not the best estimate, whether anyone asked for it or not. Whenever we have new information, we re-estimate everything about which we care and are uncertain.
- 7 **EVERYBODY SHOULD BE AN ESTIMATOR.** Ask for help; see what others on the project think. Not that you need to accept everything anybody says, but getting some stereoscopic vision on the future is never a bad idea. See No. 8.
- 8 **SERIOUS ESTIMATING IS WHAT PROFESSIONALS DO.** I don’t care what your job is. You should be working hard at becoming an excellent estimator of the effort and time required for you to complete the work for which you are responsible. It is a mandatory requirement if you call yourself a professional.
- 9 **BAD-OUTCOME AMNESIA IS A DYSFUNCTION THAT MUST BE CURED.** When your projects are chronically late, or you’re always jettisoning functionality to make a date, you have “bad-outcome amnesia.” Bad estimating and crazy goals make projects look like failures, when estimating and goal-setting were the real failures.
- 10 **THE GOOD NEWS: YOU CAN LEARN TO BE A BETTER ESTIMATOR.** Keep a private log; don’t just estimate. Along with your estimate, ask yourself: What changed that made you change your estimate? What are the facts you are using to make your estimate? What are your assumptions about what is happening and what will happen? What are your biggest variables of uncertainty? Have we ever been in this situation before? What happened and why? You can do this.



# What HR Doesn't Know about Scrum

by Michael James

Scrum [1] is a framework for learning about products and the processes we use to build them. [2] Courageously applied, Scrum's relentless "inspect-and-adapt" cycles leads to change beyond our software development practices.

Scrum has exposed the effects of outdated human resources management (HRM) practices at several organizations with which I've worked. [3] This article advocates modernizing these practices and their underlying beliefs.

## Employees Treated as Rats in a Box

Typical HRM practices are rooted in popular misunderstandings of behavioral psychology. Attempts to motivate humans extrinsically are based on B.F. Skinner's ability to elicit simple, conditioned responses from animals. For complex work, this punishment and reward game harms performance, even from rats. [4]

Organizations also have yet to fully discard the mindset of Frederick Taylor, a proponent of management practices that fail to harness intrinsic motivation and team ingenuity. Studies of human motivation reveal typical practices such as micromanagement [5,6] and performance appraisals [7] are counterproductive in the long run.

To make Scrum work, a business gives up these illusions of control in order to gain greater influence.

Scrum development team members collaborate intensively to build products according to goals they repeatedly negotiate with the product owner, who is responsible for making the team's business decisions. Results are demonstrated at the end of every fixed-length sprint (e.g., every two weeks). During sprint execution, team members develop intrinsic interest in shared goals and learn to manage each other to achieve them.

Team self-organization around business-driven goals will fall short when individuals also have goals of looking

good for the boss or outscoring teammates in 360-degree peer review contests. HR professionals often are unaware the assumptions behind corporate behaviorism have been debunked by behavioral economists [8], psychologists, and other researchers such as George Loewenstein, Alfie Kohn, W. Edwards Deming, and Dan Ariely. The long-term effects of performance appraisals and incentives undermine their intended aims: alignment, feedback, motivation, fair compensation, retention, morale, etc. HR should collaborate with Scrum teams to find other ways to achieve these aims.

## Filling Scrum Roles

Each Scrum team is a cross-functional group of about seven people (aka the Scrum development team), plus a product owner, and a ScrumMaster. [9] The tips below may help HR provide advice on who is suitable for these roles initially.

A common pitfall is to assume a manager is the automatic choice for the ScrumMaster role. The effective ScrumMaster allows leadership to emerge naturally on the Scrum team and wields no authority over it. Even when the traditional habits of managers can be overcome, their former subordinates typically continue to regard them as managers, rather than stepping up to team self-management. Next, everyone reverts to prior habits. Managers may be better suited for the product owner role. As product owners, they will get better results each sprint when someone else (i.e., a true ScrumMaster) helps interrupt the prior habits.

A Scrum development team requires a broad range of skills and habits in com-

“HR professionals often are unaware the assumptions behind corporate behaviorism have been debunked by behavioral economists, psychologists, and other researchers...”

binning analysis, design, implementation, and test automation activities into a seamless flow, such as test-driven development. A collaborative team only initially requires one or two people with these skills. If Scrum is done properly, team members without these skills will be mentored in them.

## Hiring

HR departments and hiring managers usually overemphasize credentials and skills, giving insufficient weight to the chemistry of the team. Rather than conducting a conventional job interview, let the candidate solve complex problems with the team for at least a day. Then, let the team make the hiring decision.

When tasked with assembling teams from scratch, I've ignored candidates' résumés and collaborated with the candidates on simple programming assignments to get a feel for their personalities, skills, and habits. I once had to decide whether to include a candidate whose technical ability in this exercise was relatively low. The candidate was enjoyable to work with and eager to learn, so I included her on the team. As the project progressed, team members reported she was the social glue that helped the team succeed.

## Reassignment and Firing

Experiments conducted by Will Felps demonstrate that one team member can destroy the effectiveness of an entire team by “withholding effort, expressing negative affect, or violating important interpersonal norms.” [10] In my experience, only about three percent of the workforce comprises slackers, downers, and jerks. Unfortunately, the bad apple's disproportionate impact is exacerbated when teams cannot choose their own members.

An example: Andy has a tendency to mistreat Bob, modeling behavior that causes Charlie to mistreat Dan. Aaron habitually slacks off, demoralizing conscientious team members. In a misguided attempt to be “fair,” some HR departments make it difficult for teams to remove Andy and Aaron.

In another example, a team tolerated a negative team member for months. The team avoided notifying the hiring manager of the problem until after the bad apple had been let go for other reasons. The hiring manager reported feeling disappointed the team didn’t feel it was allowed to influence its own membership.

Scrum may reveal that your bad apples are not who you thought they were. Employees who appear negative under the restrictions of traditional management are often suppressed leaders who will excel when set free in the right Scrum team.

Effective Scrum requires long-lived, cross-functional teams. Enlightened HRM policy allows Scrum teams to select their own members within these constraints.

## Job Titles and Forced Hierarchies

Job titles and hierarchies codified into HR policy aren’t ideal for Scrum team self-organization. Control should flow naturally from individual to individual as situations require. Titles suggest rank, hampering this fluid process. Complex work requires collaborative learning. Specialized titles such as “systems analyst” and “quality assurance specialist” imply limited responsibilities and skills. Ladders of job titles connecting types of work to career progression discourage ambitious people from mastering the skills the team needs most. For example, our entire industry suffers a shortage of people with excellent skills in testing.

If life without forced hierarchy strikes you as wacky, consider the General Electric plant in Durham, NC. There, 170 employees (reporting to one plant manager) use self-managing teams to build the world’s largest jet engines. An example of a company without distinct job titles is W. L. Gore & Associates. If you’ve flown on a Boeing 777 or worn a

Gore-Tex jacket, you’ve already experienced the benefits of innovative HRM.

Beyond its relationship to the product owner, a Scrum team does not require management-imposed hierarchy or formal job titles. Consider dismantling explicit hierarchies and reducing job title distinctions.

## HR as Part of the Solution

The practices this article criticizes are so pervasive that it’s difficult to appreciate their harm until one has experienced life without them. Without fundamental transformation, ordinary organizations will get limited benefits from “doing Scrum.” To be an extraordinary organization, foster collaboration between HR and Scrum teams, making HR part of the solution. {end}

### Sticky Notes

For more on the following topic go to [www.StickyMinds.com/bettersoftware](http://www.StickyMinds.com/bettersoftware).

■ References

## Index to Advertisers

ADP West	<a href="http://www.sqe.com/adpwest">www.sqe.com/adpwest</a>	25
Better Software Conference 2010	<a href="http://www.sqe.com/BSC">www.sqe.com/BSC</a>	21
BigVisible	<a href="http://www.bigvisible.com">www.bigvisible.com</a>	30
BugHost	<a href="http://www.bughost.com">www.bughost.com</a>	15
Cognizant	<a href="http://www.cognizant.com">www.cognizant.com</a>	Inside Back Cover
Hewlett-Packard	<a href="http://www.hp.com/go/software">www.hp.com/go/software</a>	Back Cover
Infosys	<a href="http://www.infosys.com/testing-services">www.infosys.com/testing-services</a>	54 (Tools Guide)
PureCM	<a href="http://www.purecm.com">www.purecm.com</a>	24
Rally Software	<a href="http://www.rallydev.com/bsm">www.rallydev.com/bsm</a>	Inside Front Cover
Ranorex	<a href="http://www.ranorex.com">www.ranorex.com</a>	5
Seapine	<a href="http://www.seapine.com">www.seapine.com</a>	1
SQE Training—Testing 2010	<a href="http://www.sqetraining.com/Testing">www.sqetraining.com/Testing</a>	8
STAREAST 2010	<a href="http://www.sqe.com/STAREAST">www.sqe.com/STAREAST</a>	31–34
StickyMinds.com PowerPass	<a href="http://www.sqe.com/go?BSMPP">www.sqe.com/go?BSMPP</a>	29
TechExcel	<a href="http://www.techexcel.com">www.techexcel.com</a>	2
Worldware Conference	<a href="http://www.worldwareconference.com">www.worldwareconference.com</a>	35

### Display Advertising

[advertisingsales@sqe.com](mailto:advertisingsales@sqe.com)

### All Other Inquiries

[info@bettersoftware.com](mailto:info@bettersoftware.com)

*Better Software* (USPS: 019-578, ISSN: 1553-1929) is published six times per year January/February, March/April, May/June, July/August, September/October, November/December. Subscription rate is US \$40.00 per year. A US \$35 shipping charge is incurred for all non-US addresses. Payments to Software Quality Engineering must be made in US funds drawn from a US bank. For more information, contact [info@bettersoftware.com](mailto:info@bettersoftware.com) or call 800.450.7854. Back issues may be purchased for \$15 per issue (plus shipping). Volume discounts available. Entire contents © 2010 by Software Quality Engineering (330 Corporate Way, Suite 300, Orange Park, FL 32073), unless otherwise noted on specific articles. The opinions expressed within the articles and contents herein do not necessarily express those of the publisher (Software Quality Engineering). All rights reserved. No material in this publication may be reproduced in any form without permission. Reprints of individual articles available. Call for details. Periodicals Postage paid in Orange Park, FL, and other mailing offices. POSTMASTER: Send address changes to Better Software, 330 Corporate Way, Suite 300, Orange Park, FL 32073, [info@bettersoftware.com](mailto:info@bettersoftware.com).



**Cognizant** | **Testing Services**  
Passion for building stronger businesses

[www.cognizant.com](http://www.cognizant.com)

# Smart **Testing** of Your **SAP** Implementation

Organizations across the globe rely on SAP applications to run their businesses. Even though these applications generate immense business value once they are implemented, getting there can be a complicated and an expensive affair. Testing of SAP implementation is critical to the operational health of your business.

With deep understanding of our customers' business challenges and testing needs, coupled with our broad experience and expertise in SAP Testing, we have developed a solution suite that encompasses governance, best practices, test process & methodology, solution accelerators, frameworks and other innovations.

With Cognizant you get certified continuous business readiness, lower costs and accelerated results unmatched in the industry.

**QuickStart**  
with us for the **best in class quality**

**World Headquarters | Cognizant Technology Solutions**

500 Frank W.Burr Blvd. Teaneck, NJ 07666 Ph: +1 201 801 0233 Fax: +1 201 801 0243 Toll-free: +1 888 937 3277



# HARNESS

**the power of Agile.**

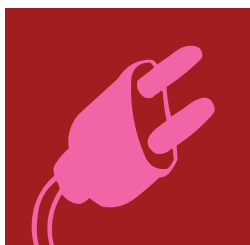
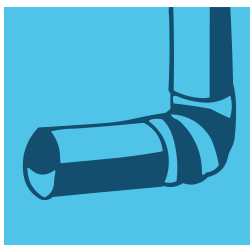
## **HP Application Lifecycle Management solutions for Agile projects**

Looking to improve the visibility and consistency of your Agile projects? HP Application Lifecycle Management solutions go beyond traditional development management to provide greater standardization, quality and control. It's the technology-agnostic, business-centric and quality-driven Agile solution for the entire application lifecycle.

**HP Enterprise Business.  
Outcomes that matter.**

Get more information at  
**[hp.com/go/alm](http://hp.com/go/alm)**





# The 2010 Tools & Services Guide

The 2010 Tools & Services Guide is a collection of sponsored tools that can help you work smarter and build better software. The information in this guide has been provided by the vendors and in no way implies endorsement by *Better Software* magazine, StickyMinds.com, or Software Quality Engineering.

## contents

CONFIGURATION MANAGEMENT	4
DEFECT TRACKING	6
DESIGN & ARCHITECTURE	11
DEVELOPMENT & DEPLOYMENT	12
MEASUREMENT & REPORTING	20
PROCESS & PROJECT MANAGEMENT	25
REQUIREMENTS	35
SECURITY	40
TEST & EVALUATION	41

## matrix legend



category

	Linux	Windows 95/98/98se	IBM AIX	Windows NT/2000	Compaq Alpha/UNIX	Windows XP	HP/HPUX	Windows Server 2003	Other Unix	Windows CE	Sun/SunOS/Solaris	PC-DOS/MS-DOS	Compaq/VMS	OS/390/MVS/VM	AS400	IBM mainframe	MAC/MacOS	VAX/VMS	Other
AgitarOne																			
AQtime																			
Automated Build Studio																			
BenderRBT Test Case Design Tool																			
BugHost Hosted Bug Tracking and Issue Management System																			
CaliberRM™																			
CodePro AnalytiX																			
CodePro Profiler																			
Cruise																			
DARTENIUM																			
DARTS – Datamatics Automated Regression Testing Suite																			
Data Express®																			
DevPartner																			
DevTest																			
DevTrack																			
DSTAR																			
GH Tester																			
HATS – Headstrong Automation Testing Solution																			
HP Business Process Testing software																			
HP Center Management for Performance Center software																			
HP Center Management for Quality Center																			
HP Diagnostics software																			
HP Functional Testing software																			
HP LoadRunner software																			
HP Quality Center software																			
HP QuickTest Professional software																			
HP Service Test software																			
IBM® Rational® DOORS®																			
IBM® Rational® Focal Point™																			
IBM® Rational® Functional Tester																			
IBM® Rational® Performance Tester																			
IBM® Rational® Quality Manager																			
IBM® Rational® Requirements Composer																			
IBM® Rational® Rhapsody®																			
IBM® Rational® Synergy Suite																			
IBM® Rational® Systems Tester																			
Infosys Clearware																			
Jama Contour																			
Klocwork Insight																			
Klocwork Solo for Java																			
Kovair Global Lifecycle																			
LDRA Testbed																			
Managed Testing Services																			
McCabe CM – TRUEchange																			
McCabe IQ																			
Mingle																			
MKS Integrity – A Solution for Agile in the Enterprise																			
MKS Integrity – Delivering Intelligent ALM™																			
MKS Integrity – Requirements Management within ALM™																			



category

	Linux	Windows 95/98/98se	IBM AIX	Windows NT/2000	Compaq Alpha/UNIX	Windows XP	HP/HPUX	Windows Server 2003	Other Unix	Windows CE	Sun/SunOS/Solaris	PC-DOS/MS-DOS	Compaq/VMS	OS/390/MVS/VM	AS400	IBM mainframe	MAC/MacOS	VAX/VMS	Other
MSTAR – Mosaic																			
Neoload																			
OpenMake Meister																			
Perforce																			
Phantom Test Driver																			
Project Management Training Services																			
PureCM Professional																			
PureCM Standard																			
QA Wizard Pro																			
Qualify																			
Bally Community Edition																			
Bally Enterprise Edition																			
Ranorex GUI Test Automation Framework																			
SeeNowDo.com																			
SilkCentral® Test Manager™																			
SilkPerformer®																			
SilkTest®																			
Smarteload																			
SmarteqM																			
SmartScript																			
SmartStudio																			
Software Planner																			
Software Test Consulting and Management																			
SQE Training – Expert Training Provider																			
StarTeam®																			
Surround SCM																			
TBreq																			
TBrun																			
TBvision																			
TeamDefine™																			
TestBench																			
TestComplete																			
TestDrive																			
TestDrive-Assist																			
TestPartner																			
TestTrack Pro																			
TestTrack TCM																			
tinyPM																			
TotalView																			
TR Sizer																			
TruePlanning																			
Twist																			
V1: Agile Enterprise by VersionOne																			
V1: Agile Team by VersionOne																			
Visual Studio® 2010 Ultimate																			
Visual Studio® Load Test Virtual User Pack 2010																			
Visual Studio® Team Lab Management 2010																			
Visual Studio® Test Elements 2010																			
WindowTester																			

## Automated Build Studio

simplify your deployment

ment build and deployment process. Users easily create visual macros by dragging and dropping pre-built operations. More than 500 built-in operations are available in a variety of categories.

[www.automatedqa.com/products/abs.asp](http://www.automatedqa.com/products/abs.asp)

[sales@automatedqa.com](mailto:sales@automatedqa.com)

### AUTOMATED BUILD STUDIO

#### AutomatedQA

Automated Build Studio is a release management system that provides an easy and visual way to automate the software develop-

telephone	978.236.7900
training available	Yes
trial available	Yes
address	100 Cummings Center Suite 420B Beverly, MA 01915



### McCABE CM—TRUECHANGE

#### McCabe Software

McCabe CM is the only Software Change and Configuration Management solution to utilize "Integrated Difference"

technology, providing an intuitive and logical approach to managing software versioning and changes. The drag-and-drop stream view allows you to securely apply change across the application lifecycle in seconds instead of days. McCabe CM helps you manage your change process, speed application delivery, and ultimately improve the quality of your software, all at a lower total cost of ownership.

[www.mccabe.com/cm.htm](http://www.mccabe.com/cm.htm)

[jpalmisano@mccabe.com](mailto:jpalmisano@mccabe.com)

telephone	401.572.3100
training available	Yes
trial available	Yes
address	41 Sharpe Dr. Cranston, RI 02920



### MKS INTEGRITY—DELIVERING INTELLIGENT ALM™

#### MKS Inc.

MKS Integrity is an enterprise application lifecycle management platform that unites the stakeholders of software development through a single source of truth for all processes, activities and assets, to manage complexity and solve the most challenging business problems. Providing a complete range of ALM competence (requirements management, software change and configuration management, test management and release management), MKS Integrity offers coherence across the application lifecycle while adapting to unique enterprise needs.

[www.mks.com/products](http://www.mks.com/products)

[sales@mks.com](mailto:sales@mks.com)

telephone	519.884.2251
training available	Yes
trial available	No
address	410 Albert St. Waterloo, Ontario N2L 3V3 Canada



### MKS INTEGRITY—REQUIREMENTS MANAGEMENT WITHIN ALM™

#### MKS Inc.

With MKS Integrity, Requirements Management becomes an interconnected part of the lifecycle as part of an Intelligent ALM™ solution. Going beyond simple requirements capture, MKS Integrity fosters collaboration between business stakeholders, developers and testers. Changes can easily be assessed before they are implemented (across projects). Reuse and requirements change management capabilities are coupled with real-time metrics and full traceability, leading to superior quality, full auditability and more rapid time-to-market.

[www.mks.com/products/requirements](http://www.mks.com/products/requirements)

[sales@mks.com](mailto:sales@mks.com)

telephone	519.884.2251
training available	Yes
trial available	No
address	410 Albert St. Waterloo, Ontario N2L 3V3 Canada



### OPENMAKE MEISTER

#### OpenMake Software

OpenMake Meister is the leading build automation solution for the enterprise. Going beyond simple workflow, Meister accelerates, simplifies and standardizes software builds across a wide range of programming languages and platforms. The Meister build automation solution provides dependency analysis, build script generation, and detailed audit reports to ensure that software is built and delivered to exacting standards. Out-of-the-box integrations are provided for all leading commercial and open source SCM, testing and deployment tools.

[www.openmakesoftware.com](http://www.openmakesoftware.com)

[mark.manzo@openmakesoftware.com](mailto:mark.manzo@openmakesoftware.com)

telephone	503.475.9292
training available	Yes
trial available	Yes
address	213 W Institute Place #404 Chicago, IL 60610



**PERFORCE**

Perforce Software

Perforce, the Fast Software Configuration Management System, versions and manages source code and digital assets

for enterprises large and small. Perforce features comprehensive SCM capabilities built around a scalable client/server architecture, and tightly integrates with leading IDEs such as Visual Studio and Eclipse, defect trackers, build tools, and more. Perforce SCM accelerates collaboration and supports the way developers and cross-function teams want to work, regardless of their location, function, and size.

[www.perforce.com/perforce/products.html](http://www.perforce.com/perforce/products.html)

[sales@perforce.com](mailto:sales@perforce.com)

telephone  
training available  
trial available  
address

510.864.7400  
Yes  
Yes  
2320 Blanding Ave.  
Alameda, CA 94501



**PURECM PROFESSIONAL**

PureCM.com Ltd

PureCM Professional is a complete Software Configuration Management (SCM) solution to manage your development process,

offering strong support for task-based and distributed development to enhance team collaboration and quality. PureCM Features: \_Cross-platform GUI client and command line interface \_Integration with Eclipse and Visual Studio \_Visualisation of history and diffs \_Optimised for parallel development \_Native support for build automation and CI \_Proxy server for remote teams \_Integrated issue tracking \_ACLs

[www.purecm.com/purecm\\_professional\\_benefits.php](http://www.purecm.com/purecm_professional_benefits.php)

[sales@purecm.com](mailto:sales@purecm.com)

telephone  
training available  
trial available  
address

44.0.1625.660.820  
No  
Yes  
Charter House  
Charter Way  
Hurdsfield, Macclesfield  
SK10 2NG  
United Kingdom



**PURECM STANDARD**

PureCM.com Ltd

PureCM Standard is a complete source control solution, offering strong support for task-based and distributed development to

enhance the quality and productivity of your software development. PureCM Features: \_Changesets and atomic commits \_Retrieve any configuration \_Private developer workspaces \_Integration with Eclipse and Visual Studio \_Visualisation of history and diffs \_Branching and merging with full merge tracking \_Native support for build automation \_ACLs to manage permissions \_Cross-platform client/server

[www.purecm.com/benefits.php](http://www.purecm.com/benefits.php)

[sales@purecm.com](mailto:sales@purecm.com)

telephone  
training available  
trial available  
address

44.0.1625.660.820  
No  
Yes  
Charter House  
Charter Way  
Hurdsfield, Macclesfield  
SK10 2NG  
United Kingdom



**STARTEAM®**

Borland (a Micro Focus Company)

StarTeam is a fully integrated, cost-effective software change and configuration management tool designed to fit the needs of development teams of all size, distribution and work style. With a robust and secure platform for coordinating and managing the entire software delivery process, StarTeam provides centralized control of all project activities and digital assets, allowing teams to control, share, and reuse assets across the organization.

[www.microfocus.com/products/StarTeam/index.asp](http://www.microfocus.com/products/StarTeam/index.asp)

[sccm@microfocus.com](mailto:sccm@microfocus.com)

telephone  
training available  
trial available  
address

512.340.2200  
Yes  
Yes  
400 Interstate Parkway  
Suite 1600  
Atlanta, GA 30339



**SURROUND SCM**

Seapine Software

Surround SCM, a scalable, cross-platform software

configuration management solution, keeps source code and digital assets organized as it tracks change throughout your organization. Simple to configure and maintain, Surround features advanced branching, configurable workflows, user-definable fields, secure remote access, and easy integration into development and build processes. It also includes Unicode and WebDAV support, in-application triggers, email notifications, and an optional proxy server for distributed teams.

[www.seapine.com/surroundscm.html](http://www.seapine.com/surroundscm.html)

[sales@seapine.com](mailto:sales@seapine.com)

telephone  
training available  
trial available  
address

513.754.1655  
Yes  
Yes  
5412 Courseview Dr.  
Suite 200  
Mason, OH 45040





## Visual Studio® Team Lab Management 2010

### VISUAL STUDIO® TEAM LAB MANAGEMENT 2010

Microsoft

A tool which enables teams to rapidly provision virtual lab environments at a known state for test execution and build

automation. Quickly setup and tear-down complex configurations, test in production-like environments and accelerate your build cycles. Eliminate no-repro scenarios with environment snapshots and shorten development cycles with Coded UI tests. Reduce total cost of ownership on virtualized labs and eliminate waste in your application lifecycle.

[www.microsoft.com/visualstudio/test](http://www.microsoft.com/visualstudio/test)

[www.microsoft.com/visualstudio/en-us/howtobuy/default.aspx](http://www.microsoft.com/visualstudio/en-us/howtobuy/default.aspx)

training available  
trial available  
address

Yes  
Yes  
One Microsoft Way  
Redmond, WA 98052



## BugHost

### BUGHOST HOSTED BUG TRACKING AND ISSUE MANAGEMENT SYSTEM

Variad Corporation

Available to enterprise customers and small businesses,  
BugHost provides world-class solutions for bug tracking and

project management: unlimited user and project licenses, requirements documents and change requests, individual and project-level task tracking, custom reports, email notifications, custom fields, customizable discussion forum, file system, test case management & logging, and much more! With so many features ... Bug Tracking, Requirements, Writing Test Cases, Task Tracking, Scheduling, Management ... just got easier!

[www.bughost.com](http://www.bughost.com)

[info@bughost.com](mailto:info@bughost.com)

telephone  
training available  
trial available  
address

503.345.4349  
No  
Yes  
PO Box 3106  
Portland, OR 97208



### DARTENIUM

Datamatics Global Services

DARTENIUM high-productivity automation framework for web testing transforms Selenium into a robust automation framework that offers

complete control over the automation process. Benefits—Hybrid framework: keyword and data-driven—Full support for Web 2.0—Create scripts easily—One-time automation pack guided, optimized through GUI—Robust execution engine: parallel runs across many machines—Complete OS-browser combo support—Inbuilt, configurable recovery scenarios—Result viewer supports faster result analysis.

[www.dartenium.datamatics.com](http://www.dartenium.datamatics.com)

[dartenium\\_salesupport@datamatics.com](mailto:dartenium_salesupport@datamatics.com)

telephone  
training available  
trial available  
address

91.22.6102.0918 /  
6102.0013 / 6102.0933  
Yes  
Yes  
Knowledge Centre  
Street No. 17  
MIDC, Andheri (East)  
Mumbai, Maharashtra  
400096 India



### DARTS—DATAMATICS AUTOMATED REGRESSION TESTING SUITE

Datamatics Global Services

A keyword-driven automation framework following a component-based modular structure, facilitates reuse across diverse applications on various technologies.—It is based on the principle of Functional Decomposition and Keyword Driven Methodology. It has the best practices for automation design.—Functional experts

are enabled to create automation scripts using an excel interface thus reducing cost for Automation resources.—Global flags to run failed scenarios, thus reducing configuration time.

[www.datamatics.com/Services\\_Testing\\_Automation\\_DARTS.htm](http://www.datamatics.com/Services_Testing_Automation_DARTS.htm)

[bijesh\\_kamath@datamatics.com](mailto:bijesh_kamath@datamatics.com)

telephone  
training available  
trial available  
address

91.22.6102.0918 /  
6102.0013 / 6102.0933  
Yes  
Yes  
Knowledge Centre  
Street No. 17  
MIDC, Andheri (East)  
Mumbai, Maharashtra  
400096 India



## DEVTEST

TechExcel, Inc.

Using DevTest, QA managers and engineers can create, manage, and document all test plans in a centralized repository. Users can then schedule and assign these tests to their team using an intuitive wizard driven interface. Once assigned, testers execute these tasks and defects can be automatically submitted to development projects establishing links automatically between the test task and the submitted defects. DevTest tracks your tests in built-in presentation quality reports and unique planning dashboards.

[www.techexcel.com/products/devtest.html](http://www.techexcel.com/products/devtest.html)
[dgaber@techexcel.com](mailto:dgaber@techexcel.com)

 telephone  
training available  
trial available  
address

 800.439.7782 ext. 5  
Yes  
Yes  
3675 Mt. Diablo Blvd.  
Suite 200  
Lafayette, CA 94549


## DEVTRACK

TechExcel, Inc.

A development tracking tool that helps to ensure that quality products are developed and delivered on time and on budget by modeling business processes and aligning development with knowledge. Integrations with popular version control tools allow for items to be tracked with related source code.

[www.techexcel.com/products/devtrack.html](http://www.techexcel.com/products/devtrack.html)
[dgaber@techexcel.com](mailto:dgaber@techexcel.com)

 telephone  
training available  
trial available  
address

 800.439.7782 ext. 5  
Yes  
Yes  
3675 Mt. Diablo Blvd.  
Suite 200  
Lafayette, CA 94549


## HP QUALITY CENTER SOFTWARE

HP Software &amp; Solutions

HP Quality Center software offers a single, web-based application that supports all essential aspects of test management. It provides a consistent, repeatable process for gathering requirements, planning and scheduling tests, analyzing results and managing defects and issues. This software enables your organization to digitize specific quality processes and procedures within the larger application lifecycle. It also supports high levels of communication and collaboration among your IT team.

[www.hp.com/go/software](http://www.hp.com/go/software)
[vw@hp.com](mailto:vw@hp.com)

 telephone  
training available  
trial available  
address

 408.725.8900  
Yes  
Yes  
19091 Pruneridge Ave.  
Cupertino, CA 95014

**mingle**® MINGLE  
Agile Project Management

ThoughtWorks Studios

Changing business priorities. Mingle's usability-rich interface empowers your global development team with a shared team space. Your team can easily collaborate in a thousand ad hoc

ways, based on your defined baseline process such as Scrum, XP, and Hybrid. As Mingle is used day-to-day by your entire team it contains complete, real-time and true-to-life project activity. This provides your entire team visibility to ensure that projects/programs are in line with business vision.

[studios.thoughtworks.com/mingle-agile-project-management](http://studios.thoughtworks.com/mingle-agile-project-management)
[studios@thoughtworks.com](mailto:studios@thoughtworks.com)

 telephone  
training available  
trial available  
address

 512.382.5017  
Yes  
Yes  
Market Street  
SpearTower  
35th Floor  
San Francisco, CA  
94105


## MKS INTEGRITY—DELIVERING INTELLIGENT ALM™

MKS Inc.

MKS Integrity is an enterprise application lifecycle management platform that unites the stakeholders of software development through a single source of truth for all processes, activities and assets, to manage complexity and solve the most challenging business problems. Providing a complete range of ALM competence (requirements management, software change and configuration management, test management and release management), MKS Integrity offers coherence across the application lifecycle while adapting to unique enterprise needs.

[www.mks.com/products](http://www.mks.com/products)
[sales@mks.com](mailto:sales@mks.com)

 telephone  
training available  
trial available  
address

 519.884.2251  
Yes  
No  
410 Albert St.  
Waterloo, Ontario  
N2L 3V3 Canada



#### PERFORCE

##### Perforce Software

Perforce, the Fast Software Configuration Management System, versions and manages source code and digital assets

for enterprises large and small. Perforce features comprehensive SCM capabilities built around a scalable client/server architecture, and tightly integrates with leading IDEs such as Visual Studio and Eclipse, defect trackers, build tools, and more. Perforce SCM accelerates collaboration and supports the way developers and cross-function teams want to work, regardless of their location, function, and size.

[www.perforce.com/perforce/products.html](http://www.perforce.com/perforce/products.html)

[sales@perforce.com](mailto:sales@perforce.com)

telephone	510.864.7400
training available	Yes
trial available	Yes
address	2320 Blanding Ave. Alameda, CA 94501



#### PURECM PROFESSIONAL

##### PureCM.com Ltd

PureCM Professional is a complete Software Configuration Management (SCM) solution to manage your development process,

offering strong support for task-based and distributed development to enhance team collaboration and quality. PureCM Features: \_Cross-platform GUI client and command line interface \_Integration with Eclipse and Visual Studio \_Visualisation of history and diffs \_Optimised for parallel development \_Native support for build automation and CI \_Proxy server for remote teams \_Integrated issue tracking \_ACLs

[www.purecm.com/purecm\\_professional\\_benefits.php](http://www.purecm.com/purecm_professional_benefits.php)

[sales@purecm.com](mailto:sales@purecm.com)

telephone	44.0.1625.660.820
training available	No
trial available	Yes
address	Charter House Charter Way Hurdsfield, Macclesfield SK10 2NG United Kingdom



Scaling Software Agility

#### RALLY COMMUNITY EDITION

##### Rally Software Development

Rally is the leader in Agile application lifecycle management (ALM) dedicated to making leaner development organizations that respond faster to changing customer needs. According to a QSMA study, teams that rely on Rally are 50%

faster to market and 25% more productive than industry averages. Rally's products were honored with four Jolt Awards in 2006, 2007, 2008 and 2009. Rally currently supports more than 1,600 corporate customers, 42,000 projects and 63,000 users in 50 countries. For more information, visit [www.rallydev.com](http://www.rallydev.com).

[www.rallydev.com/agile\\_products](http://www.rallydev.com/agile_products)

[info@rallydev.com](mailto:info@rallydev.com)

telephone	303.565.2800
training available	Yes
trial available	Yes
address	4001 Discovery Dr. Suite 220 Boulder, CO 80303



Scaling Software Agility

#### RALLY ENTERPRISE EDITION

##### Rally Software Development

Rally is the leader in Agile application lifecycle management (ALM) dedicated to making leaner development organizations that respond faster to changing customer needs. According to a QSMA study, teams that rely on Rally are 50%

faster to market and 25% more productive than industry averages. Rally's products were honored with four Jolt Awards in 2006, 2007, 2008 and 2009. Rally currently supports more than 1,600 corporate customers, 42,000 projects and 63,000 users in 50 countries. For more information, visit [www.rallydev.com](http://www.rallydev.com).

[www.rallydev.com/agile\\_products](http://www.rallydev.com/agile_products)

[info@rallydev.com](mailto:info@rallydev.com)

telephone	303.565.2800
training available	Yes
trial available	Yes
address	4001 Discovery Dr. Suite 220 Boulder, CO 80303



Software Planner

[www.softwareplanner.com](http://www.softwareplanner.com)

#### SOFTWARE PLANNER

##### AutomatedQA

Software Planner is an award winning application lifecycle management (ALM) tool that helps you manage all of software development like customer requirements, project deliverables, test cases, defects and support tickets. Coupled with collaborative tools like document sharing, team calendars, interactive dashboards,

knowledge bases and threaded discussions, teams communicate effectively and quickly deliver high quality software. Trusted by 70K+ users in 24 countries and customers like Acer Computers and Procter and Gamble.

[www.softwareplanner.com](http://www.softwareplanner.com)

[sales@pragmaticsw.com](mailto:sales@pragmaticsw.com)

telephone	800.773.7785
training available	Yes
trial available	Yes
address	383 Inverness Parkway Suite 280 Englewood, CO 80112





## Original Software

### TESTBENCH

#### Original Software

TestBench is available for SQL Server, Oracle and System i. It facilitates the management and manipulation of database and visual layer components and is able to show you what happened in the database as a result of the test process, allowing you to view and interrogate the database effects. Test Data Management functionality enables testers to extract and subset data for test environments, scramble sensitive data and roll-back the database to a previous state if it becomes corrupted.

[www.origsoft.com/products/testbench/solutions@origsoft.com](http://www.origsoft.com/products/testbench/solutions@origsoft.com)

telephone  
training available  
trial available  
address

44.0.1256.338.666  
Yes  
No  
Grove House  
Chineham Court  
Basingstoke, Hants  
RG24 8AG  
United Kingdom



## Original Software

### TESTDRIVE

#### Original Software

A full-featured automated testing solution designed to test GUI and browser applications "out-of-the-box". TestDrive uniquely solves the twin issues of complexity and maintenance which have historically been a stumbling block with automation solutions. It requires no programming skills, empowering subject matter experts to define and execute sophisticated tests without the need to use any kind of code or scripting. The self-healing technology automatically adapts tests enabling minimum maintenance and maximum reuse.

[www.origsoft.com/products/testdrive/solutions@origsoft.com](http://www.origsoft.com/products/testdrive/solutions@origsoft.com)

telephone  
training available  
trial available  
address

44.0.1256.338.666  
Yes  
No  
Grove House  
Chineham Court  
Basingstoke, Hants  
RG24 8AG  
United Kingdom



## Original Software

### TESTDRIVE-ASSIST

#### Original Software

A new concept in testing that delivers active support for manual testing and compiles history on recent testing, making it easy to re-create and isolate software defects. TestDrive-Assist tracks every user action within the application under test at both the visual layer and at the database level non-intrusively. Testers can detect and highlight defects quickly which can be saved for a full audit trail of test results. Test steps are recorded and can easily be converted into an automated script in TestDrive.

[www.origsoft.com/products/testdrive-assist/solutions@origsoft.com](http://www.origsoft.com/products/testdrive-assist/solutions@origsoft.com)

telephone  
training available  
trial available  
address

44.0.1256.338.666  
Yes  
No  
Grove House  
Chineham Court  
Basingstoke, Hants  
RG24 8AG  
United Kingdom



### TESTTRACK PRO

#### Seapine Software

TestTrack Pro, a scalable, cross-platform issue management solution, facilitates team collaboration across the enterprise. Simple to install, easy to use and maintain, TestTrack Pro features comprehensive workflow and process automation rules, powerful filters, escalation rules, email tracking, reports, and role-based security. It also includes extensive customizations, seamless integration with current development tools, and support for MS SQL Server, Oracle, and MySQL. Keep team members informed and on schedule with TestTrack Pro.

[www.seapine.com/ttpro.html](http://www.seapine.com/ttpro.html)  
[sales@seapine.com](mailto:sales@seapine.com)

telephone  
training available  
trial available  
address

513.754.1655  
Yes  
Yes  
5412 Courseview Dr.  
Suite 200  
Mason, OH 45040



### TESTTRACK TCM

#### Seapine Software

TestTrack TCM, a scalable, cross-platform test case planning and tracking solution, manages all facets of the software testing process including test case creation, scheduling, execution, measurement, organization, and reporting. TestTrack TCM integrates with the leading issue management solution, TestTrack Pro, to automate the plan->test->fix cycle. Complete support for managing automated testing processes is also included. Manage the testing workload with Seapine TestTrack TCM.

[www.seapine.com/ttcm.html](http://www.seapine.com/ttcm.html)  
[sales@seapine.com](mailto:sales@seapine.com)

telephone  
training available  
trial available  
address

513.754.1655  
Yes  
Yes  
5412 Courseview Dr.  
Suite 200  
Mason, OH 45040



#### V1: AGILE ENTERPRISE BY VERSIONONE

VersionOne

To help ensure success using Agile methodologies, enterprises worldwide have made V1: Agile Enterprise the

#1 Agile project management software choice for any type of Agile methodology. V1: Agile Enterprise is an easy-to-use, centralized agile planning and management system that is perfect for multi-team, multi-project organizations as well as experienced agile teams. With integrated agile processes and improved alignment between business and IT, V1: Agile Enterprise is the most scalable, flexible, and informative tool on the market.

[www.versionone.com/products.asp](http://www.versionone.com/products.asp)

[Richard.Fuller@versionone.com](mailto:Richard.Fuller@versionone.com)

telephone  
training available  
trial available  
address

678.268.3320  
Yes  
Yes  
6220 Shiloh Rd.  
Suite 400  
Alpharetta, GA 30005



#### V1: AGILE TEAM BY VERSIONONE

VersionOne

V1: Agile Team combines VersionOne's industry-leading Agile project management expertise with the needs of

small team who are new to Agile. By focusing on core Agile concepts—team collaboration, continuous planning and incremental delivery—we've created a streamlined solution that gives teams everything they need to quickly and easily get started with Agile planning, tracking and reporting. With V1: Agile Team, your team will stay on schedule and deliver software on time.

[www.versionone.com/products\\_V1Team\\_Overview.asp](http://www.versionone.com/products_V1Team_Overview.asp)

[Richard.Fuller@versionone.com](mailto:Richard.Fuller@versionone.com)

telephone  
training available  
trial available  
address

678.268.3320  
Yes  
No  
6220 Shiloh Rd.  
Suite 400  
Alpharetta, GA 30005



#### VISUAL STUDIO® LOAD TEST VIRTUAL USER PACK 2010

Microsoft

Simulate real-world application performance, stress and load conditions and validate that your solutions are ready

for customers and identifying potential issues early in the application lifecycle. Each pack includes 1000 virtual users which can be aggregated when used in conjunction with Visual Studio Test Agents to achieve the most demanding and scale-out loads. The powerful and extensible load testing platform based on standard tools and frameworks enables teams to collaborate more effectively and scale solutions more predictably.

[www.microsoft.com/visualstudio/test](http://www.microsoft.com/visualstudio/test)

[www.microsoft.com/visualstudio/en-us/howtobuy/default.mspx](http://www.microsoft.com/visualstudio/en-us/howtobuy/default.mspx)

training available  
trial available  
address

Yes  
Yes  
One Microsoft Way  
Redmond, WA 98052



#### VISUAL STUDIO® TEST ELEMENTS 2010

Microsoft

A specialized toolset for QA & Test professionals which delivers a brand new experience for test planning and manual test execution. Align test

teams with the application lifecycle, break the silos across your development and testing teams and enable them to collaborate more effectively. Help eliminate waste across the application lifecycle and embrace change through the use of Test Impact Analysis, rich actionable bug filing and Fast Forward for Manual Testing. Create transparency & allow for better decision making through reporting.

[www.microsoft.com/visualstudio/test](http://www.microsoft.com/visualstudio/test)

[www.microsoft.com/visualstudio/en-us/howtobuy/default.mspx](http://www.microsoft.com/visualstudio/en-us/howtobuy/default.mspx)

training available  
trial available  
address

Yes  
Yes  
One Microsoft Way  
Redmond, WA 98052

**SOFTWARE QUALITY ENGINEERING CONFERENCES** assist professionals interested in improving software practices. Five conferences are hosted annually—the **STAR** conference series, the **Better Software Conference**, and the **Agile Development Practices** series. Is testing your specialty? **STAREAST** and **STARWEST** are the largest and most advanced testing forums, providing you with countless networking opportunities, exclusive access to solutions providers, and the chance to get up close and personal with industry experts. Maybe your interest is in development lifecycle practices. If so, the **Better Software Conference** provides the latest tools, trends, and issues related to agile development approaches, plan-driven development, process improvement, measurement, and much more. Is your environment more agile driven? The **Agile Development Practices** series focuses on investigating or implementing agile development practices, processes, technologies, and leadership principles. Attend one, or attend all. We have something to meet all of your software needs. [www.sqe.com/go?CONF10](http://www.sqe.com/go?CONF10)



#### HP FUNCTIONAL TESTING SOFTWARE

##### HP Software & Solutions

HP Functional Testing software delivers a complete automated solution for functional, graphical user interface, and regression testing that helps you reduce the risks of application failures. This software enables your entire team to correct

functionality across all environments, data sets and business processes. You can also create sophisticated test suites with minimal training and easily perform regression testing in constantly changing environments.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
Yes  
19091 Pruneridge Ave.  
Cupertino, CA 95014



#### HP QUICKTEST PROFESSIONAL SOFTWARE

##### HP Software & Solutions

HP QuickTest Professional supports functional and regression test automation that addresses every major software application environment. This solution uses the concept of keyword-driven testing to simplify test creation and maintenance.

It enables testers to build functional and regression test cases by capturing flows directly from the application screens using specialized capturing technology. Test experts also have full access to the underlying test and object properties via an integrated scripting and debugging environment.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
Yes  
19091 Pruneridge Ave.  
Cupertino, CA 95014



#### IBM® RATIONAL® RHAPSODY®

##### IBM Rational

IBM Rational Rhapsody is the industry's leading embedded and real time Model Driven Development (MDD) environment for systems,

software, and test. Rhapsody enables systems engineers and software developers to achieve unparalleled productivity gains over traditional document driven approaches by enabling the user to specify systems and software design graphically, simulate and automatically validate the system as it is being built to ultimately produce full production code from the model for the embedded systems.

[www-01.ibm.com/software/rational/products/rhapsody/swarchitect/](http://www-01.ibm.com/software/rational/products/rhapsody/swarchitect/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504



#### KLOCWORK INSIGHT

##### Klocwork Inc.

Klocwork source code analysis solutions

boost the productivity of software development teams while helping to ensure code security, quality and stability of complex code bases. Through proven static analysis techniques, Klocwork removes bottlenecks at the earliest stages of the software development process and enables software developers to find critical security vulnerabilities, quality defects and architectural issues quickly and accurately. More than 600 organizations have achieved higher code security and quality with Klocwork.

[www.klocwork.com/products/insight.asp](http://www.klocwork.com/products/insight.asp)

[kelly.duncan@klocwork.com](mailto:kelly.duncan@klocwork.com)

telephone  
training available  
trial available  
address

866.556.2967  
Yes  
Yes  
25 Burlington Mall Rd.  
Suite 300  
Burlington, MA 01803



#### KLOCWORK SOLO FOR JAVA

##### Klocwork Inc.

Klocwork Solo takes Klocwork's proven,

enterprise-ready, static source code analysis technology and packages it for the individual Java developer. With Klocwork Solo for Java, developers focused on mobile software development or web application development can find critical bugs and security vulnerabilities in their source code quickly and accurately.

[www.klocwork.com/products/Solo.asp](http://www.klocwork.com/products/Solo.asp)

[kelly.duncan@klocwork.com](mailto:kelly.duncan@klocwork.com)

telephone  
training available  
trial available  
address

866.556.2967  
No  
Yes  
25 Burlington Mall Rd.  
Suite 300  
Burlington, MA 01803





## Visual Studio® 2010 Ultimate

### VISUAL STUDIO® 2010 ULTIMATE

Microsoft

An integrated environment of tools and server infrastructure that simplifies the entire application development process. Deliver business results using productive, predictable, customizable processes & increase transparency and traceability throughout the lifecycle with detailed analytics. Realize increased team productivity by utilizing advanced collaboration features & use integrated testing and debugging tools to find and fix bugs quickly & easily creating high quality solutions while driving down the cost of solution development.

[www.microsoft.com/visualstudio/test](http://www.microsoft.com/visualstudio/test)

[www.microsoft.com/visualstudio/en-us/howtobuy/default.aspx](http://www.microsoft.com/visualstudio/en-us/howtobuy/default.aspx)

training available  
trial available  
address

Yes  
Yes  
One Microsoft Way  
Redmond, WA 98052



### AGITARONE

Agitar Technologies, Inc.

AgitarOne helps you work safer, better, and smarter as you develop and maintain Java applications. AgitarOne JUnit Generator creates thorough JUnit tests on your code, with 80% coverage out of the box! It helps find regressions and makes it safer and easier to improve code, reducing maintenance costs. AgitarOne Agitator helps you understand the behavior of your code as it is written, aiding the prevention of bugs and code complexity. AgitarOne is the best way to create, use, and manage the unit tests that you need to be truly agile.

[www.agitar.com/solutions/products/agitarone.html](http://www.agitar.com/solutions/products/agitarone.html)

[jpalmisano@agitar.com](mailto:jpalmisano@agitar.com)

telephone  
training available  
trial available  
address

401.572.3150  
Yes  
Yes  
41 Sharpe Dr.  
Cranston, RI 02920

## Automated Build Studio

simplify your deployment

### AUTOMATED BUILD STUDIO

AutomatedQA

Automated Build Studio is a release management system that provides an easy and visual way to automate the software development build and deployment process. Users easily create visual macros by dragging and dropping pre-built operations. More than 500 built-in operations are available in a variety of categories.

[www.automatedqa.com/products/abs.asp](http://www.automatedqa.com/products/abs.asp)

[sales@automatedqa.com](mailto:sales@automatedqa.com)

telephone  
training available  
trial available  
address

978.236.7900  
Yes  
Yes  
100 Cummings Center  
Suite 420B  
Beverly, MA 01915

## CodePro AnalytiX™

### CODEPRO ANALYTIX

Instantiations, Inc.

CodePro AnalytiX is the premier Java software testing tool for Eclipse developers who want to improve the quality and security of their code. AnalytiX seamlessly integrates into the Eclipse environment, using automated static analysis to pinpoint and correct quality and security issues (includes 1200+ audit rules with over 225 OWASP standard-based security rules). AnalytiX also includes JUnit test generation and editing; code coverage and metrics; analysis for dependencies, duplicate or dead code; team collaboration tools and more.

[www.instantiations.com/codepro/analytix/about.html](http://www.instantiations.com/codepro/analytix/about.html)

[sales@instantiations.com](mailto:sales@instantiations.com)

telephone  
training available  
trial available  
address

503.598.4900  
Yes  
Yes  
18101 SW Boones  
Ferry Rd.  
Suite 200  
Portland, OR 97224

## CodePro Profiler™

### CODEPRO PROFILER

Instantiations, Inc.

CodePro Profiler is an Eclipse-based software

development product that enables Java developers to easily find performance problems early in the development cycle, with flexible subscription-based pricing starting at \$39. • Automatically locate performance bottlenecks, memory leaks, and threading issues • Highly accurate profiling with nearly zero overhead • On-demand profiling with powerful telemetry reporting • Seamlessly integrates into Eclipse development, on desktop or headless • Extensive documentation and optimization guide

[www.instantiations.com/codepro/profiler](http://www.instantiations.com/codepro/profiler)

[sales@instantiations.com](mailto:sales@instantiations.com)

telephone  
training available  
trial available  
address

503.598.4900  
Yes  
Yes  
18101 SW Boones  
Ferry Rd.  
Suite 200  
Portland, OR 97224



## cruise®

Release Management

### CRUISE

ThoughtWorks Studios

Continuous integration tools fall short when handling the complexities of release management. Lack of a common tool to manage

commit-to-production automated releases lowers visibility, delays critical feedback and causes expensive defects. Cruise gives real-time visibility and control of your build, deploy, test and release process, not only to the build teams, but also to testers, developers and management. With a focus on shortening the feedback cycle, accelerating automation, and collaborating over releases.

[studios.thoughtworks.com/cruise-release-management](http://studios.thoughtworks.com/cruise-release-management)

[studios@thoughtworks.com](mailto:studios@thoughtworks.com)

telephone  
training available  
trial available  
address

512.382.5017  
Yes  
Yes  
Market Street  
SpearTower  
35th Floor  
San Francisco, CA  
94105



Leading the Evolution™

### DEVPARTNER

Borland (a Micro Focus Company)

The DevPartner product line automates the most time consuming development tasks including code reviews, debugging and performance tuning for .NET and native Windows applications. With

DevPartner, developers can quickly detect and diagnose software defects and performance problems, and access built-in expert coding advice, coding standards and best practices to improve development skills.

[www.microfocus.com/products/DevPartner/index.asp](http://www.microfocus.com/products/DevPartner/index.asp)

[devpartner@microfocus.com](mailto:devpartner@microfocus.com)

telephone  
training available  
trial available  
address

512.340.2200  
Yes  
Yes  
400 Interstate Parkway  
Suite 1600  
Atlanta, GA 30339



Software Risk Management Services

### DSTAR

Mosaic, Inc.

DSTAR™ is a Quality Center (QC) add-on that tracks and

maintains test data assignments for reusable tests in QC using an ODBC-compliant database. DSTAR™ controls and maintains test data extracted from databases or created externally. DSTAR™ allows test data assignments to be maintained as late as test execution time and then provides the data for test execution. DSTAR™ includes an integrated test automation framework and management reporting. It maximizes reusability and maintainability of all your testing assets with or without BPT.

[www.mosaicinc.com](http://www.mosaicinc.com)

[kjohns@mosaicinc.com](mailto:kjohns@mosaicinc.com)

telephone  
training available  
trial available  
address

312.819.2220  
Yes  
No  
205 N Michigan Ave.  
Suite 2211  
Chicago, IL 60601



[www.sqetraining.com](http://www.sqetraining.com)

### EXPERT TRAINING PROVIDER

SQE Training

SQE Training provides the widest selection of specialized software training courses available. Find the training you need for your testing, development, management,

requirements, and security challenges. Courses can be delivered in a variety of modes;

Public, On-site, Live Virtual, and eLearning. Become an ISTQB™ certified software tester and train for either the foundation or advanced level certifications with SQE Training courses. Get the professional development units you need for your PMI Certification by taking courses that have been accredited by the PMI.

[www.sqetraining.com](http://www.sqetraining.com)

[jmacnaughton@sqe.com](mailto:jmacnaughton@sqe.com)

telephone  
training available  
trial available  
address

904.278.0524 ext. 212  
Yes  
Yes  
330 Corporate Way  
Suite 300  
Orange Park, FL 32073

## GREENHAT



### GH TESTER

Green Hat

Organizations realize agility, quality and productivity easily

and quickly with Green Hat's quality management tools for the SOA lifecycle. GH Tester makes testing simple. Customers get superior end-to-end coverage with automated functional, regression and performance testing, virtualization and governance compliance for composite applications that rely on SOA, BPM, messaging and legacy technologies. With testing reduced from weeks to minutes and risks identified in advance, customers and service providers innovate with confidence.

[www.greenhat.com/tg2010](http://www.greenhat.com/tg2010)

[sales@greenhat.com](mailto:sales@greenhat.com)

telephone  
training available  
trial available  
address

302.746.7416  
Yes  
Yes  
650 Naamans Rd.  
Claymont, DE 19703



### HP CENTER MANAGEMENT FOR QUALITY CENTER

HP Software & Solutions

HP Center Management for Quality Center software helps your organization manage HP Quality Center software as a shared Center of Excellence. The combination of proven best practices and HP Project and Portfolio Management

software enables your organization to conquer your quality management challenges. You can manage application project lifecycle and quality assurance test phases, resources and skill sets; automate project and resource management processes; and improve center administration and management.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
No  
19091 Pruneridge Ave.  
Cupertino, CA 95014



### HP DIAGNOSTICS SOFTWARE

HP Software & Solutions

HP Diagnostics software helps you improve application availability and performance in pre-production and production environments. You can drill down from the end user into application components and cross platform service calls to

resolve the toughest problems. This includes slow services, methods, SQL, out of memory errors, threading problems and more.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
Yes  
19091 Pruneridge Ave.  
Cupertino, CA 95014



### HP LOADRUNNER SOFTWARE

HP Software & Solutions

HP LoadRunner software can help you prevent costly performance problems in production by detecting bottlenecks before a new system or upgrade is deployed. This software enables you to measure end-to-end performance,

diagnose application and system bottlenecks and tune for better performance—all from a single point of control. This helps reduce the costs and time required to test and deploy new applications and systems into your production environment.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
Yes  
19091 Pruneridge Ave.  
Cupertino, CA 95014



### HP QUICKTEST PROFESSIONAL SOFTWARE

HP Software & Solutions

HP QuickTest Professional supports functional and regression test automation that addresses every major software application environment. This solution uses the concept of keyword-driven testing to simplify test creation and maintenance.

It enables testers to build functional and regression test cases by capturing flows directly from the application screens using specialized capturing technology. Test experts also have full access to the underlying test and object properties via an integrated scripting and debugging environment.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
Yes  
19091 Pruneridge Ave.  
Cupertino, CA 95014



**HP SERVICE TEST SOFTWARE****HP Software & Solutions**

HP Service Test software is a SOA testing solution that simplifies and accelerates the automated functional testing of SOA services. It reduces the time required to test SOA services and helps ensure that these services meet your

business requirements prior to deployment. It enables your organization to simplify your testing processes and minimize the need for scripting by automating capabilities.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
No  
19091 Pruneridge Ave.  
Cupertino, CA 95014

**IBM® RATIONAL® FUNCTIONAL TESTER****IBM Rational**

IBM® Rational® Functional Tester is an advanced, automated functional and regression testing tool for testers and GUI developers who need

superior control for testing Java, VS.NET and Web-based applications. Business Analysts can jumpstart test earlier in the lifecycle with visual storyboarding that uses natural language and rendered screenshots to create, edit, and execute tests.

[www-01.ibm.com/software/awdtools/tester/functional/index.html](http://www-01.ibm.com/software/awdtools/tester/functional/index.html)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504

**IBM® RATIONAL® QUALITY MANAGER****IBM Rational**

IBM® Rational® Quality Manager is a Jazz-built web-based centralized test management environment for business, system and IT decision makers

and quality professionals who seek a collaborative and customizable solution for test planning, workflow control, tracking and metrics reporting capable of quantifying how project decisions and deliverables impact and align with business objectives.

[www.ibm.com/software/awdtools/rqm/](http://www.ibm.com/software/awdtools/rqm/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504

**IBM® RATIONAL® REQUIREMENTS COMPOSER****IBM Rational**

Rational® Requirements Composer is a Jazz-built requirements solution that enables stakeholders to collaborate in context to define and

manage high-quality requirements using a variety of visual and textual techniques. Rational Requirements Composer integrates with Rational Team Concert and Rational Quality Manager, enabling project teams to shorten planning cycles and reduce rework by aligning development and test effort with requirements and business objectives.

[www.ibm.com/software/awdtools/rrc/](http://www.ibm.com/software/awdtools/rrc/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504

**IBM® RATIONAL® RHAPSODY®****IBM Rational**

IBM Rational Rhapsody is the industry's leading embedded and real time Model Driven Development (MDD) environment for systems,

software, and test. Rhapsody enables systems engineers and software developers to achieve unparalleled productivity gains over traditional document driven approaches by enabling the user to specify systems and software design graphically, simulate and automatically validate the system as it is being built to ultimately produce full production code from the model for the embedded systems.

[www-01.ibm.com/software/rational/products/rhapsody/swarchitect/](http://www-01.ibm.com/software/rational/products/rhapsody/swarchitect/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504



#### JAMA CONTOUR

##### Jama Software

As the #1 Web-based requirements management software, Contour provides a powerful, collaborative solution to help companies build great software products. With Contour, you do not have to change your process and you achieve immediate benefits: **SPEED**—Contour cuts product planning and requirements management cycles in half. **ALIGNMENT**—Contour keeps your entire team in sync throughout the product development process. **QUALITY**—Contour helps you reduce costly errors and ensure high quality releases on time.

[www.jamasoftware.com/contour](http://www.jamasoftware.com/contour)

[cprusia@jamasoftware.com](mailto:cprusia@jamasoftware.com)

telephone  
training available  
trial available  
address

503.922.1058  
Yes  
Yes  
700 SW Taylor St.  
Suite 400  
Portland, OR 97201



#### KLOCWORK INSIGHT

##### Klocwork Inc.

Klocwork source code analysis solutions

boost the productivity of software development teams while helping to ensure code security, quality and stability of complex code bases. Through proven static analysis techniques, Klocwork removes bottlenecks at the earliest stages of the software development process and enables software developers to find critical security vulnerabilities, quality defects and architectural issues quickly and accurately. More than 600 organizations have achieved higher code security and quality with Klocwork.

[www.klocwork.com/products/insight.asp](http://www.klocwork.com/products/insight.asp)

[kelly.duncan@klocwork.com](mailto:kelly.duncan@klocwork.com)

telephone  
training available  
trial available  
address

866.556.2967  
Yes  
Yes  
25 Burlington Mall Rd.  
Suite 300  
Burlington, MA 01803



#### KLOCWORK SOLO FOR JAVA

##### Klocwork Inc.

Klocwork Solo takes Klocwork's proven,

enterprise-ready, static source code analysis technology and packages it for the individual Java developer. With Klocwork Solo for Java, developers focused on mobile software development or web application development can find critical bugs and security vulnerabilities in their source code quickly and accurately.

[www.klocwork.com/products/Solo.asp](http://www.klocwork.com/products/Solo.asp)

[kelly.duncan@klocwork.com](mailto:kelly.duncan@klocwork.com)

telephone  
training available  
trial available  
address

866.556.2967  
No  
Yes  
25 Burlington Mall Rd.  
Suite 300  
Burlington, MA 01803



#### LDRA TESTBED

##### LDRA Ltd.

Static analysis and code coverage tool for C, C++, Java, Ada83/Ada95 and Assembler (Intel, Freescale, Texas Instruments). Static

analysis features include code visualisation, programming standards checking and complexity metrics. Code coverage is available for different coverage levels including MC/DC level A for the DO-178B standard, regression testing and available for any host/target environment.

[www.ldra.com/testbed.asp](http://www.ldra.com/testbed.asp)

[jonathan.kelly@ldra.com](mailto:jonathan.kelly@ldra.com)

telephone  
training available  
trial available  
address

44.0.151.649.9300  
Yes  
Yes  
Portside, Monks Ferry  
Wirral, CH41 5LH  
United Kingdom



#### McCABE CM—TRUECHANGE

##### McCabe Software

McCabe CM is the only Software Change and Configuration Management solution to utilize "Integrated Difference"

technology, providing an intuitive and logical approach to managing software versioning and changes. The drag-and-drop stream view allows you to securely apply change across the application lifecycle in seconds instead of days. McCabe CM helps you manage your change process, speed application delivery, and ultimately improve the quality of your software, all at a lower total cost of ownership.

[www.mccabe.com/cm.htm](http://www.mccabe.com/cm.htm)

[jpalmisano@mccabe.com](mailto:jpalmisano@mccabe.com)

telephone  
training available  
trial available  
address

401.572.3100  
Yes  
Yes  
41 Sharpe Dr.  
Cranston, RI 02920

# MKS

## MKS INTEGRITY—DELIVERING INTELLIGENT ALM™

MKS Inc.

MKS Integrity is an enterprise application lifecycle management platform that unites the stakeholders of software development through a single source of truth for all processes, activities and assets, to manage complexity and solve the most challenging business problems. Providing a complete range of ALM competence (requirements management, software change and configuration management, test management and release management), MKS Integrity offers coherence across the application lifecycle while adapting to unique enterprise needs.

[www.mks.com/products](http://www.mks.com/products)

[sales@mks.com](mailto:sales@mks.com)

telephone  
training available  
trial available  
address

519.884.2251  
Yes  
No  
410 Albert St.  
Waterloo, Ontario  
N2L 3V3 Canada

# MKS

## MKS INTEGRITY—A SOLUTION FOR AGILE IN THE ENTERPRISE

MKS Inc.

MKS Integrity is a single software platform that addresses the end-to-end lifecycle of Agile software development, from epics and user stories to defects and change requests to test and release management. As a single source of truth for all development activities and assets MKS Integrity enables the flexibility and collaboration needed for Agile while ensuring management transparency and control across Agile and traditional teams, smoothing the transition and addressing the challenges of scaling Agile to the enterprise.

[www.mks.com/solutions/agile\\_development](http://www.mks.com/solutions/agile_development)

[sales@mks.com](mailto:sales@mks.com)

telephone  
training available  
trial available  
address

519.884.2251  
Yes  
No  
410 Albert St.  
Waterloo, Ontario  
N2L 3V3 Canada



# NEOTYS

## NEOLOAD

Neotys

NeoLoad is a load testing software designed for Web applications, realistically simulating users and analyzing your servers' behavior. It supports RIAs based on AJAX, Flex, Silverlight, GWT....NeoLoad's exclusive technology allows you to test more quickly, efficiently and frequently so you can deploy your Internet and Intranet applications with total peace of mind. Thanks to its monitoring modules, NeoLoad identifies performance bottlenecks, allowing you to correct them prior to production.

[www.neotys.com](http://www.neotys.com)

[christophe.marton@neotys.com](mailto:christophe.marton@neotys.com)

telephone  
training available  
trial available  
address

33.442.180.830  
Yes  
Yes  
445 Park Avenue Center  
New York, NY 10022



# OpenMake Software

## OPENMAKE MEISTER

OpenMake Software

OpenMake Meister is the leading build automation solution for the enterprise. Going beyond simple workflow, Meister accelerates, simplifies and standardizes software builds across a wide range of programming languages and platforms. The Meister build automation solution provides dependency analysis, build script generation, and detailed audit reports to ensure that software is built and delivered to exacting standards. Out-of-the-box integrations are provided for all leading commercial and open source SCM, testing and deployment tools.

[www.openmakesoftware.com](http://www.openmakesoftware.com)

[mark.manzo@openmakesoftware.com](mailto:mark.manzo@openmakesoftware.com)

telephone  
training available  
trial available  
address

503.475.9292  
Yes  
Yes  
213 W Institute Place  
#404  
Chicago, IL 60610



# PureCM

## PURECM PROFESSIONAL

PureCM.com Ltd

PureCM Professional is a complete Software Configuration Management (SCM) solution to manage your development process, offering strong support for task-based and distributed development to enhance team collaboration and quality. PureCM Features: \_Cross-platform GUI client and command line interface \_Integration with Eclipse and Visual Studio \_Visualisation of history and diffs \_Optimised for parallel development \_Native support for build automation and CI \_Proxy server for remote teams \_Integrated issue tracking \_ACLs

[www.purecm.com/purecm\\_professional\\_benefits.php](http://www.purecm.com/purecm_professional_benefits.php)

[sales@purecm.com](mailto:sales@purecm.com)

telephone  
training available  
trial available  
address

44.0.1625.660.820  
No  
Yes  
Charter House  
Charter Way  
Hurdsfield, Macclesfield  
SK10 2NG  
United Kingdom





#### PURECM STANDARD

PureCM.com Ltd

PureCM Standard is a complete source control solution, offering strong support for task-based and distributed development to enhance the quality and productivity of your software development. PureCM Features: \_Changesets and atomic commits \_Retrieve any configuration \_Private developer workspaces \_Integration with Eclipse and Visual Studio \_Visualisation of history and diffs \_Branching and merging with full merge tracking \_Native support for build automation \_ACLs to manage permissions \_Cross-platform client/server

[www.purecm.com/benefits.php](http://www.purecm.com/benefits.php)

[sales@purecm.com](mailto:sales@purecm.com)

telephone  
training available  
trial available  
address

44.0.1625.660.820  
No  
Yes  
Charter House  
Charter Way  
Hurdsfield, Macclesfield  
SK10 2NG  
United Kingdom



#### QA WIZARD PRO

Seapine Software

QA Wizard Pro automates the functional and regression testing of Web and Windows applications. Featuring a next-generation scripting language and an easy-to-use Grid View, QA Wizard Pro includes advanced object searching, a global application repository, data-driven testing support, validation check points, and built-in debugging. It also includes batch file support, a real-time status tool, and remote execution support. Focus on what you want to test, instead of how to test it, with Seapine QA Wizard Pro.

[www.seapine.com/qawizard.html](http://www.seapine.com/qawizard.html)

[sales@seapine.com](mailto:sales@seapine.com)

telephone  
training available  
trial available  
address

513.754.1655  
Yes  
Yes  
5412 Courseview Dr.  
Suite 200  
Mason, OH 45040



#### RANOREX GUI TEST AUTOMATION FRAMEWORK

Ranorex

Ranorex is a Windows UI test automation framework for testing many different application types including Web 2.0 applications, WPF, Silverlight, Adobe Flash/Flex, .NET and Java. The Ranorex Recorder enables capture/replay of UI tests, edit actions and generates real C#, VB.NET and IronPython code. Ranorex object repositories enable separation of test automation code/recordings from RanorexXPath identification information. The IDE includes test project management, intuitive code editor, code completion, debugging, and watch monitor.

[www.ranorex.com](http://www.ranorex.com)

[info@ranorex.com](mailto:info@ranorex.com)

telephone  
training available  
trial available  
address

43.316.28.13.28  
Yes  
Yes  
Strassgangerstr. 289  
Graz, Steiermark  
8054 Austria



#### SEENOWDO.COM

BigVisible Solutions

SeeNowDo provides simple, flexible virtual taskboards designed specifically to meet the needs of distributed Agile and Scrum teams. This highly interactive collaboration tool provides instant updates to all project users. The "Instant Sync" capability allows individuals to take advantage of collaborative taskboards across distributed teams in real-time. No Downloads. No lag. No delays. No annoying ads. Completely Free.

[www.SeeNowDo.com](http://www.SeeNowDo.com)

[gmorein@bigvisible.com](mailto:gmorein@bigvisible.com)

telephone  
training available  
trial available  
address

617.216.3621  
No  
No  
1306 Columbia Rd.  
Suite 4A  
Boston, MA 02127



#### SMARTESTUDIO

SmarteSoft Inc.

SmarteStudio is an advanced, GUI-driven, unit-test automation tool and environment which provides an open API with which you can extend its already substantial capabilities to meet virtually any need. Developers using Studio and QA teams using SmarteScript v6.0 can share scripts and extensions, allowing you to extract maximum value from your teams. SmarteStudio provides strong support for Adobe Flash/Flex, MicroSoft .NET, Java (2010), and many other environments.

[gary.bowers@smarteSoft.com](mailto:gary.bowers@smarteSoft.com)

telephone  
training available  
trial available  
address

512.782.9406  
Yes  
No  
3200 Steck Ave.  
Suite 260  
Austin, TX 78757

**TBRUN**

LDRA Ltd.

TBrun is LDRA's automated unit testing tool. The functionality within TBrun includes a GUI interface which automates the production of test data vectors (by using TBeXtreme) whilst test harness and stub generation is completely automatic. It also produces the test documentation and other reports. Automatic generation of test data vectors can be provided by TBeXtreme for robustness, test scenarios and support of black-box, white-box and object-box testing.

[www.ldra.com/tbrun.asp](http://www.ldra.com/tbrun.asp)
[jonathan.kelly@ldra.com](mailto:jonathan.kelly@ldra.com)

 telephone  
training available  
trial available  
address

 44.0.151.649.9300  
Yes  
Yes  
Portside, Monks Ferry  
Wirral, CH41 5LH  
United Kingdom
**TESTTRACK TCM**

Seapine Software

TestTrack TCM, a scalable, cross-platform test case planning and tracking solution, manages all facets of the software testing process including test case creation, scheduling, execution, measurement, organization, and reporting. TestTrack TCM integrates with the leading issue management solution, TestTrack Pro, to automate the plan->test->fix cycle. Complete support for managing automated testing processes is also included. Manage the testing workload with Seapine TestTrack TCM.

[www.seapine.com/ttcm.html](http://www.seapine.com/ttcm.html)
[sales@seapine.com](mailto:sales@seapine.com)

 telephone  
training available  
trial available  
address

 513.754.1655  
Yes  
Yes  
5412 Courseview Dr.  
Suite 200  
Mason, OH 45040
**TOTALVIEW**

TotalView Technologies

TotalView is a GUI-based source code debugger and analysis tool that gives you control over processes and thread execution and visibility into program state and variables. It allows you to reproduce and troubleshoot difficult problems in concurrent programs that take advantage of threads, OpenMP, MPI, or computational accelerators. TotalView provides analytical displays of a running program's state for efficient debugging of memory errors and leaks and diagnosis of subtle problems like deadlocks and race conditions.

[www.totalviewtech.com/download/index.html](http://www.totalviewtech.com/download/index.html)
[contactsales@totalviewtech.com](mailto:contactsales@totalviewtech.com)

 telephone  
training available  
trial available  
address

 508.652.7700  
Yes  
Yes  
24 Prime Park Way  
Natick, MA 01760
**twist**

Test Automation

**Twist**

ThoughtWorks Studios

Today's business world demands high-quality software that is thoroughly tested and completely aligned to the customer's needs. Twist combines both of these with its novel collaborative testing platform. Twist sustains business focus by using business intent directly expressed by business users in their domain language as test specifications. Twist integrates quality with its feature-rich IDE that empowers testers to create, maintain and evolve both your automated and manual tests.

[studios.thoughtworks.com/agile-test-automation](http://studios.thoughtworks.com/agile-test-automation)
[studios@thoughtworks.com](mailto:studios@thoughtworks.com)

 telephone  
training available  
trial available  
address

 512.382.5017  
Yes  
Yes  
Market Street  
SpearTower  
35th Floor  
San Francisco, CA  
94105

**Visual Studio** 2010  
Ultimate
**VISUAL STUDIO® 2010 ULTIMATE**

Microsoft

An integrated environment of tools and server infrastructure that simplifies the entire application development process. Deliver business results using productive, predictable, customizable processes & increase transparency and traceability throughout the lifecycle with detailed analytics. Realize increased team productivity by utilizing advanced collaboration features & use integrated testing and debugging tools to find and fix bugs quickly & easily creating high quality solutions while driving down the cost of solution development.

[www.microsoft.com/visualstudio/test](http://www.microsoft.com/visualstudio/test)
[www.microsoft.com/visualstudio/en-us/howtobuy/default.msp](http://www.microsoft.com/visualstudio/en-us/howtobuy/default.msp)

 training available  
trial available  
address

 Yes  
Yes  
One Microsoft Way  
Redmond, WA 98052



### VISUAL STUDIO® TEAM LAB MANAGEMENT 2010

Microsoft

A tool which enables teams to rapidly provision virtual lab environments at a known state for test execution and build

automation. Quickly setup and tear-down complex configurations, test in production-like environments and accelerate your build cycles. Eliminate no-repro scenarios with environment snapshots and shorten development cycles with Coded UI tests. Reduce total cost of ownership on virtualized labs and eliminate waste in your application lifecycle.

[www.microsoft.com/visualstudio/test](http://www.microsoft.com/visualstudio/test)

[www.microsoft.com/visualstudio/en-us/howtobuy/default.aspx](http://www.microsoft.com/visualstudio/en-us/howtobuy/default.aspx)

training available  
trial available  
address

Yes  
Yes  
One Microsoft Way  
Redmond, WA 98052

## WindowTester™

WINDOWTESTER

Instantiations, Inc.

WindowTester Pro is a GUI testing tool that

streamlines testing of Java rich client applications using the SWT or Swing UI frameworks, providing tools to automate recording, test generation, code coverage and playback of GUI interactions within an application. Seamlessly integrates with Eclipse, generating 100% JUnit-compatible code for a high quality and consistent user experience. Once you have developed SWT or Swing Java GUI tests, WindowTester Runner provides UI test execution as a separate function, great for larger teams.

[www.instantiations.com/windowtester](http://www.instantiations.com/windowtester)

[sales@instantiations.com](mailto:sales@instantiations.com)

telephone  
training available  
trial available  
address

503.598.4900  
Yes  
Yes  
18101 SW Boones  
Ferry Rd.  
Suite 200  
Portland, OR 97224



AGITARONE

Agitar Technologies, Inc.

AgitarOne helps you work safer, better, and smarter as you develop and maintain Java applications. AgitarOne JUnit Generator creates thorough JUnit tests on your code, with 80% coverage out of the box! It helps find regressions

and makes it safer and easier to improve code, reducing maintenance costs. AgitarOne Agitator helps you understand the behavior of your code as it is written, aiding the prevention of bugs and code complexity.

AgitarOne is the best way to create, use, and manage the unit tests that you need to be truly agile.

[www.agitar.com/solutions/products/agitarone.html](http://www.agitar.com/solutions/products/agitarone.html)

[jpalmisano@agitar.com](mailto:jpalmisano@agitar.com)

telephone  
training available  
trial available  
address

401.572.3150  
Yes  
Yes  
41 Sharpe Dr.  
Cranston, RI 02920

## AQtime

eliminate leaks and bottlenecks

AQTIME

AutomatedQA

AQtime is a performance profiler and memory debug-

ger engineered to give developers unparalleled insight into all aspects of the performance of their applications. AQtime provides a single solution for detecting performance bottlenecks and memory leaks within managed, unmanaged and mixed-code applications. AQtime supports Microsoft Visual Studio, .NET, ASP.NET, C++, VB, Delphi, 32-bit, 64-bit and integrates tightly with TestComplete.

[www.automatedqa.com/aqtime](http://www.automatedqa.com/aqtime)

[sales@automatedqa.com](mailto:sales@automatedqa.com)

telephone  
training available  
trial available  
address

978.236.7900  
Yes  
Yes  
100 Cummings Center  
Suite 420B  
Beverly, MA 01915



**BENDER RBT TEST CASE DESIGN TOOL**

Bender RBT Inc.

BenderRBT has two test design engines: Cause-Effect Graphing and Pair Wise. The Graphing engine is the only test tool that designs tests that ensure that defects are propagated to an observable point. Its tests maximize coverage while minimizing the number of tests. It does a logical consistency check on the requirements and can generate an as built spec from the test model—critical for agile projects. The Pair

Wise engine supports both orthogonal pairs and optimized pairs. Both engines do strong negative testing.

[rbender@benderrbt.com](mailto:rbender@benderrbt.com)

training available  
trial available  
address

Yes  
Yes  
17 Cardinale Lane  
Queensbury, NY 12804

**CodePro Profiler™****CODEPRO PROFILER**

Instantiations, Inc.

CodePro Profiler is an Eclipse-based software

development product that enables Java developers to easily find performance problems early in the development cycle, with flexible subscription-based pricing starting at \$39. • Automatically locate performance bottlenecks, memory leaks, and threading issues • Highly accurate profiling with nearly zero overhead • On-demand profiling with powerful telemetry reporting • Seamlessly integrates into Eclipse development, on desktop or headless • Extensive documentation and optimization guide

[www.instantiations.com/codepro/profiler](http://www.instantiations.com/codepro/profiler)

[sales@instantiations.com](mailto:sales@instantiations.com)

telephone  
training available  
trial available  
address

503.598.4900  
Yes  
Yes  
18101 SW Boones  
Ferry Rd.  
Suite 200  
Portland, OR 97224

**cruise®**

Release Management

**CRUISE**

ThoughtWorks Studios

Continuous integration tools fall short when handling the complexities of release management. Lack of a common tool to manage

commit-to-production automated releases lowers visibility, delays critical feedback and causes expensive defects. Cruise gives real-time visibility and control of your build, deploy, test and release process, not only to the build teams, but also to testers, developers and management. With a focus on shortening the feedback cycle, accelerating automation, and collaborating over releases.

[studios.thoughtworks.com/cruise-release-management](http://studios.thoughtworks.com/cruise-release-management)

[studios@thoughtworks.com](mailto:studios@thoughtworks.com)

telephone  
training available  
trial available  
address

512.382.5017  
Yes  
Yes  
Market Street  
Spear Tower  
35th Floor  
San Francisco, CA  
94105

**DEVTEST**

TechExcel, Inc.

Using DevTest, QA managers and engineers can create, manage, and document all test plans in a centralized repository. Users can then schedule and assign these tests to their team using an intuitive wizard driven interface. Once assigned, testers execute these tasks and defects can be automatically submitted to development projects establishing links automatically between the test task and the submitted defects. DevTest tracks your tests in built-in presentation quality reports and unique planning dashboards.

[www.techexcel.com/products/devtest.html](http://www.techexcel.com/products/devtest.html)

[dgaber@techexcel.com](mailto:dgaber@techexcel.com)

telephone  
training available  
trial available  
address

800.439.7782 ext. 5  
Yes  
Yes  
3675 Mt. Diablo Blvd.  
Suite 200  
Lafayette, CA 94549

**DEVTRACK**

TechExcel, Inc.

A development tracking tool that helps to ensure that quality products are developed and delivered on time and on budget by modeling business processes and aligning development with knowledge. Integrations with popular version control tools allow for items to be tracked with related source code.

[www.techexcel.com/products/devtrack.html](http://www.techexcel.com/products/devtrack.html)

[dgaber@techexcel.com](mailto:dgaber@techexcel.com)

telephone  
training available  
trial available  
address

800.439.7782 ext. 5  
Yes  
Yes  
3675 Mt. Diablo Blvd.  
Suite 200  
Lafayette, CA 94549

## GREENHAT



### GH TESTER

Green Hat

Organizations realize agility, quality and productivity easily

and quickly with Green Hat's quality management tools for the SOA lifecycle. GH Tester makes testing simple. Customers get superior end-to-end coverage with automated functional, regression and performance testing, virtualization and governance compliance for composite applications that rely on SOA, BPM, messaging and legacy technologies. With testing reduced from weeks to minutes and risks identified in advance, customers and service providers innovate with confidence.

[www.greenhat.com/tg2010](http://www.greenhat.com/tg2010)

[sales@greenhat.com](mailto:sales@greenhat.com)

telephone	302.746.7416
training available	Yes
trial available	Yes
address	650 Naamans Rd. Claymont, DE 19703

## hats

tried and tested

### HATS—HEADSTRONG AUTOMATION TESTING SOLUTION

Headstrong LLP

HATS is an internal tool developed by Headstrong in an effort to accelerate the test execution process. It uses specific attributes and adds developed scripts to its repository. At scheduled times, HATS executes scripts and

along with its monitoring and test management layers, HATS provides a clear path for test execution along with a report identifying scripts that have passed and those with issues. HATS has been used extensively with several of our clients in reducing their regression burden as much as 60% from its initial use.

[www.headstrong.com](http://www.headstrong.com)

[karnik.minassian@headstrong.com](mailto:karnik.minassian@headstrong.com)

telephone	408.530.5575
training available	Yes
trial available	No
address	220 W 42nd St. New York, NY 10036



### HP DIAGNOSTICS SOFTWARE

HP Software & Solutions

HP Diagnostics software helps you improve application availability and performance in pre-production and production environments. You can drill down from the end user into application components and cross platform service calls to

resolve the toughest problems. This includes slow services, methods, SQL, out of memory errors, threading problems and more.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone	408.725.8900
training available	Yes
trial available	Yes
address	19091 Pruneridge Ave. Cupertino, CA 95014



### HP LOADRUNNER SOFTWARE

HP Software & Solutions

HP LoadRunner software can help you prevent costly performance problems in production by detecting bottlenecks before a new system or upgrade is deployed. This software enables you to measure end-to-end performance,

diagnose application and system bottlenecks and tune for better performance—all from a single point of control. This helps reduce the costs and time required to test and deploy new applications and systems into your production environment.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone	408.725.8900
training available	Yes
trial available	Yes
address	19091 Pruneridge Ave. Cupertino, CA 95014

## KOVAIR

### KOVAIR GLOBAL LIFECYCLE

Kovair Software, Inc.

With adaptive workflow and highly configurable process management, Kovair solutions are designed from the ground up as an integrated web-based platform enabling anytime, anywhere access. Kovair Global Lifecycle is a rich, configurable, global platform which includes a complete set of integrated tools and processes for managing the entire application lifecycle. Kovair Global Lifecycle's tools use a shared single repository and a common user interface, enabling seamless interoperability.

[www.kovair.com/products-ented.asp](http://www.kovair.com/products-ented.asp)

[sales@kovair.com](mailto:sales@kovair.com)

telephone	408.262.0200 ext. 2007
training available	Yes
trial available	Yes
address	1533 California Cir. Milpitas, CA 95035

**McCabe IQ****McCabe Software**

The McCabe IQ suite is made up of three multi-platform, multi-language software quality management solutions. McCabe IQ

Developers Edition visualizes the complexity of source code and provides a host of metrics with which to measure quality. McCabe IQ Test Team Edition identifies precisely what areas of code have been tested and facilitates improved test plans. McCabe Enterprise Edition provides all the functionality of the Developers and Test Team Editions, in addition to enterprise reporting and web-enabled test data collection.

[www.mccabe.com/iq.htm](http://www.mccabe.com/iq.htm)

[jpalmisano@mccabe.com](mailto:jpalmisano@mccabe.com)

telephone  
training available  
trial available  
address

401.572.3100  
Yes  
Yes  
41 Sharpe Dr.  
Cranston, RI 02920

**mingle**

Agile Project Management

**MINGLE****ThoughtWorks Studios**

Changing business priorities. Mingle's usability-rich interface empowers your global development team with a shared team space. Your team can easily collaborate in a thousand ad hoc

ways, based on your defined baseline process such as Scrum, XP, and Hybrid. As Mingle is used day-to-day by your entire team it contains complete, real-time and true-to-life project activity. This provides your entire team visibility to ensure that projects/programs are in line with business vision.

[studios.thoughtworks.com/mingle-agile-project-management](http://studios.thoughtworks.com/mingle-agile-project-management)

[studios@thoughtworks.com](mailto:studios@thoughtworks.com)

telephone  
training available  
trial available  
address

512.382.5017  
Yes  
Yes  
Market Street  
SpearTower  
35th Floor  
San Francisco, CA  
94105

**NEOTYS****NEOLOAD****Neotys**

NeoLoad is a load testing software designed for Web applications, realistically simulating users and analyzing your servers' behavior. It supports RIAs based on AJAX, Flex, Silverlight, GWT....NeoLoad's exclusive technology allows you to test more quickly, efficiently and frequently so you can deploy your Internet and Intranet applications with total peace of mind. Thanks to its monitoring modules, NeoLoad identifies performance bottlenecks, allowing you to correct them prior to production.

[www.neotys.com](http://www.neotys.com)

[christophe.marton@neotys.com](mailto:christophe.marton@neotys.com)

telephone  
training available  
trial available  
address

33.442.180.830  
Yes  
Yes  
445 Park Avenue Center  
New York, NY 10022

**Seapine Software****QA Wizard Pro****Seapine Software**

QA Wizard Pro automates the functional and

regression testing of Web and Windows applications. Featuring a next-generation scripting language and an easy-to-use Grid View, QA Wizard Pro includes advanced object searching, a global application repository, data-driven testing support, validation check points, and built-in debugging. It also includes batch file support, a real-time status tool, and remote execution support. Focus on what you want to test, instead of how to test it, with Seapine QA Wizard Pro.

[www.seapine.com/qawizard.html](http://www.seapine.com/qawizard.html)

[sales@seapine.com](mailto:sales@seapine.com)

telephone  
training available  
trial available  
address

513.754.1655  
Yes  
Yes  
5412 Courseview Dr.  
Suite 200  
Mason, OH 45040

**Seapine Software****SURROUND SCM****Seapine Software**

Surround SCM, a scalable, cross-platform software

configuration management solution, keeps source code and digital assets organized as it tracks change throughout your organization. Simple to configure and maintain, Surround features advanced branching, configurable workflows, user-definable fields, secure remote access, and easy integration into development and build processes. It also includes Unicode and WebDAV support, in-application triggers, email notifications, and an optional proxy server for distributed teams.

[www.seapine.com/surroundscm.html](http://www.seapine.com/surroundscm.html)

[sales@seapine.com](mailto:sales@seapine.com)

telephone  
training available  
trial available  
address

513.754.1655  
Yes  
Yes  
5412 Courseview Dr.  
Suite 200  
Mason, OH 45040





#### TBVISION

##### LDRA Ltd.

TBvision provides transparency into source code, enabling managers, teams and developers to better monitor testing, quality metrics, memory errors and security vulnerabilities. Recognising the increased need for graphical ability to show code quality, fault detection and avoidance measures, TBvision incorporates next-generation reporting capabilities. As a highly flexible solution, TBvision provides users with the ability to quickly and easily view results in call graphs, flow graphs and code review reports for graphical feedback.

[www.ldra.com/tbvision.asp](http://www.ldra.com/tbvision.asp)

[jonathan.kelly@ldra.com](mailto:jonathan.kelly@ldra.com)

telephone  
training available  
trial available  
address

44.0.151.649.9300  
Yes  
Yes  
Portside, Monks Ferry  
Wirral, CH41 5LH  
United Kingdom



#### Original Software

#### TESTBENCH

##### Original Software

TestBench is available for SQL Server, Oracle and System i. It facilitates the management and manipulation of database and visual layer components and is able to show you what happened in the database as a result of the test process, allowing you to view and interrogate the database effects. Test Data Management functionality enables testers to extract and subset data for test environments, scramble sensitive data and roll-back the database to a previous state if it becomes corrupted.

[www.origsoft.com/products/testbench/](http://www.origsoft.com/products/testbench/)

[solutions@origsoft.com](mailto:solutions@origsoft.com)

telephone  
training available  
trial available  
address

44.0.1256.338.666  
Yes  
No  
Grove House  
Chineham Court  
Basingstoke, Hants  
RG24 8AG  
United Kingdom



#### Original Software

#### TESTDRIVE

##### Original Software

A full-featured automated testing solution designed to test GUI and browser applications "out-of-the-box". TestDrive uniquely solves the twin issues of complexity and maintenance which have historically been a stumbling block with automation solutions. It requires no programming skills, empowering subject matter experts to define and execute sophisticated tests without the need to use any kind of code or scripting. The self-healing technology automatically adapts tests enabling minimum maintenance and maximum reuse.

[www.origsoft.com/products/testdrive/](http://www.origsoft.com/products/testdrive/)

[solutions@origsoft.com](mailto:solutions@origsoft.com)

telephone  
training available  
trial available  
address

44.0.1256.338.666  
Yes  
No  
Grove House  
Chineham Court  
Basingstoke, Hants  
RG24 8AG  
United Kingdom



#### Original Software

#### TESTDRIVE-ASSIST

##### Original Software

A new concept in testing that delivers active support for manual testing and compiles history on recent testing, making it easy to re-create and isolate software defects. TestDrive-Assist tracks every user action within the application under test at both the visual layer and at the database level non-intrusively. Testers can detect and highlight defects quickly which can be saved for a full audit trail of test results. Test steps are recorded and can easily be converted into an automated script in TestDrive.

[www.origsoft.com/products/testdrive-assist/](http://www.origsoft.com/products/testdrive-assist/)

[solutions@origsoft.com](mailto:solutions@origsoft.com)

telephone  
training available  
trial available  
address

44.0.1256.338.666  
Yes  
No  
Grove House  
Chineham Court  
Basingstoke, Hants  
RG24 8AG  
United Kingdom



#### TESTTRACK PRO

##### Seapine Software

TestTrack Pro, a scalable, cross-platform issue management solution, facilitates team collaboration across the enterprise. Simple to install, easy to use and maintain, TestTrack Pro features comprehensive workflow and process automation rules, powerful filters, escalation rules, email tracking, reports, and role-based security. It also includes extensive customizations, seamless integration with current development tools, and support for MS SQL Server, Oracle, and MySQL. Keep team members informed and on schedule with TestTrack Pro.

[www.seapine.com/ttpro.html](http://www.seapine.com/ttpro.html)

[sales@seapine.com](mailto:sales@seapine.com)

telephone  
training available  
trial available  
address

513.754.1655  
Yes  
Yes  
5412 Courseview Dr.  
Suite 200  
Mason, OH 45040

**TR SIZER**

Mosaic, Inc.

TR Sizer is a measurement repository and software sizing tool that supports an alternative sizing measure—testable requirements (TRs). TRs are an intuitive, flexible, easily implemented and powerful alternative to function points and lines of code. Measuring system size enables more reliable estimates, enhanced change control, increased accountability for outsourced work, more effective EVM and improved measurement of quality and productivity. Based on requirements, the TR measure also highlights and helps manage requirement risk.

[www.testablerequirements.com](http://www.testablerequirements.com)
[kjohns@mosaicinc.com](mailto:kjohns@mosaicinc.com)

 telephone  
training available  
trial available  
address

 312.819.2220  
Yes  
No  
205 N Michigan Ave.  
Suite 2211  
Chicago, IL 60601
**Visual Studio Load Test Virtual User Pack 2010****VISUAL STUDIO® LOAD TEST VIRTUAL USER PACK 2010**

Microsoft

Simulate real-world application performance, stress and load conditions and validate that your solutions are ready

for customers and identifying potential issues early in the application lifecycle. Each pack includes 1000 virtual users which can be aggregated when used in conjunction with Visual Studio Test Agents to achieve the most demanding and scale-out loads. The powerful and extensible load testing platform based on standard tools and frameworks enables teams to collaborate more effectively and scale solutions more predictably.

[www.microsoft.com/visualstudio/test](http://www.microsoft.com/visualstudio/test)
[www.microsoft.com/visualstudio/en-us/howtobuy/default.mspx](http://www.microsoft.com/visualstudio/en-us/howtobuy/default.mspx)

 training available  
trial available  
address

 Yes  
Yes  
One Microsoft Way  
Redmond, WA 98052
**Visual Studio Test Elements 2010****VISUAL STUDIO® TEST ELEMENTS 2010**

Microsoft

A specialized toolset for QA & Test professionals which delivers a brand new experience for test planning and manual test execution. Align test teams

with the application lifecycle, break the silos across your development and testing teams and enable them to collaborate more effectively. Help eliminate waste across the application lifecycle and embrace change through the use of Test Impact Analysis, rich actionable bug filing and Fast Forward for Manual Testing. Create transparency & allow for better decision making through reporting.

[www.microsoft.com/visualstudio/test](http://www.microsoft.com/visualstudio/test)
[www.microsoft.com/visualstudio/en-us/howtobuy/default.mspx](http://www.microsoft.com/visualstudio/en-us/howtobuy/default.mspx)

 training available  
trial available  
address

 Yes  
Yes  
One Microsoft Way  
Redmond, WA 98052
**BUGHOST HOSTED BUG TRACKING AND ISSUE MANAGEMENT SYSTEM**

Variad Corporation

Available to enterprise customers and small businesses,

BugHost provides world-class solutions for bug tracking and

project management: unlimited user and project licenses, requirements documents and change requests, individual and project-level task tracking, custom reports, email notifications, custom fields, customizable discussion forum, file system, test case management & logging, and much more! With so many features ...

Bug Tracking, Requirements, Writing Test Cases, Task Tracking, Scheduling, Management ... just got easier!

[www.bughost.com](http://www.bughost.com)
[info@bughost.com](mailto:info@bughost.com)

 telephone  
training available  
trial available  
address

 503.345.4349  
No  
Yes  
PO Box 3106  
Portland, OR 97208



#### DARTS—DATAMATICS AUTOMATED REGRESSION TESTING SUITE

##### Datamatics Global Services

A keyword-driven automation framework following a component-based modular structure, facilitates reuse across diverse applications on various technologies.—It is based on the principle of Functional Decomposition and Keyword Driven Methodology. It has the best practices for automation design.—Functional experts

are enabled to create automation scripts using an excel interface thus reducing cost for Automation resources.—Global flags to run failed scenarios, thus reducing configuration time.

[www.datamatics.com/Services\\_Testing\\_Automation\\_DARTS.htm](http://www.datamatics.com/Services_Testing_Automation_DARTS.htm)

[bijesh\\_kamath@datamatics.com](mailto:bijesh_kamath@datamatics.com)

telephone 91.22.6102.0918 /  
6102.0013 / 6102.0933  
training available Yes  
trial available Yes  
address Knowledge Centre  
Street No. 17  
MIDC, Andheri (East)  
Mumbai, Maharashtra  
400096 India



#### DEVTRACK

##### TechExcel, Inc.

A development tracking tool that helps to ensure that quality products are developed and delivered on time and on budget by modeling business processes and aligning development with knowledge. Integrations with popular version control tools allow for items to be tracked with related source code.

[www.techexcel.com/products/devtrack.html](http://www.techexcel.com/products/devtrack.html)

[dgaber@techexcel.com](mailto:dgaber@techexcel.com)

telephone 800.439.7782 ext. 5  
training available Yes  
trial available Yes  
address 3675 Mt. Diablo Blvd.  
Suite 200  
Lafayette, CA 94549



#### DSTAR

##### Mosaic, Inc.

DSTAR™ is a Quality Center (QC) add-on that tracks and

maintains test data assignments for reusable tests in QC using an ODBC-compliant database. DSTAR™ controls and maintains test data extracted from databases or created externally. DSTAR™ allows test data assignments to be maintained as late as test execution time and then provides the data for test execution. DSTAR™ includes an integrated test automation framework and management reporting. It maximizes reusability and maintainability of all your testing assets with or without BPT.

[www.mosaicinc.com](http://www.mosaicinc.com)

[kjohns@mosaicinc.com](mailto:kjohns@mosaicinc.com)

telephone 312.819.2220  
training available Yes  
trial available No  
address 205 N Michigan Ave.  
Suite 2211  
Chicago, IL 60601



[www.sqetraining.com](http://www.sqetraining.com)

#### EXPERT TRAINING PROVIDER

##### SQE Training

SQE Training provides the widest selection of specialized software training courses available. Find the training you need for your testing, development, management, requirements, and security challenges. Courses can be delivered in a variety of modes;

Public, On-site, Live Virtual, and eLearning. Become an ISTQB™ certified software tester and train for either the foundation or advanced level certifications with SQE Training courses. Get the professional development units you need for your PMI Certification by taking courses that have been accredited by the PMI.

[www.sqetraining.com](http://www.sqetraining.com)

[jmacnaughton@sqe.com](mailto:jmacnaughton@sqe.com)

telephone 904.278.0524 ext. 212  
training available Yes  
trial available Yes  
address 330 Corporate Way  
Suite 300  
Orange Park, FL 32073



#### HATS—HEADSTRONG AUTOMATION TESTING SOLUTION

##### Headstrong LLP

HATS is an internal tool developed by Headstrong in an effort to accelerate the test execution process. It uses specific attributes and adds developed scripts to its repository. At scheduled times, HATS executes scripts and along

with its monitoring and test management layers, HATS provides a clear path for test execution along with a report identifying scripts that have passed and those with issues. HATS has been used extensively with several of our clients in reducing their regression burden as much as 60% from its initial use.

[www.headstrong.com](http://www.headstrong.com)

[karnik.minassian@headstrong.com](mailto:karnik.minassian@headstrong.com)

telephone 408.530.5575  
training available Yes  
trial available No  
address 220 W 42nd St.  
New York, NY 10036



#### ® HP BUSINESS PROCESS TESTING SOFTWARE

##### HP Software & Solutions

HP Business Process Testing software is a web-based test design solution that bridges the quality chasm between subject matter experts and quality engineers. This role-based system enables subject matter experts to build, data-

drive and execute manual and automated tests without any programming knowledge. It reduces the overhead required to test maintenance and combines test automation and documentation into a single effort.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
No  
19091 Pruneridge Ave.  
Cupertino, CA 95014



#### ® HP CENTER MANAGEMENT FOR PERFORMANCE CENTER SOFTWARE

##### HP Software & Solutions

HP Center Management for Performance Center software enables you to deploy a successful testing Center of Excellence. This out-of-the-box demand, project and resource management solution provides consistency, control and visibility

across your testing activities. It enables your IT organization to leverage common solutions, methodologies and templates in a way that greatly improves your performance testing process.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
No  
19091 Pruneridge Ave.  
Cupertino, CA 95014



#### ® HP CENTER MANAGEMENT FOR QUALITY CENTER

##### HP Software & Solutions

HP Center Management for Quality Center software helps your organization manage HP Quality Center software as a shared Center of Excellence. The combination of proven best practices and HP Project and Portfolio Management

software enables your organization to conquer your quality management challenges. You can manage application project lifecycle and quality assurance test phases, resources and skill sets; automate project and resource management processes; and improve center administration and management.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
No  
19091 Pruneridge Ave.  
Cupertino, CA 95014



#### ® HP FUNCTIONAL TESTING SOFTWARE

##### HP Software & Solutions

HP Functional Testing software delivers a complete automated solution for functional, graphical user interface, and regression testing that helps you reduce the risks of application failures. This software enables your entire team to correct

functionality across all environments, data sets and business processes. You can also create sophisticated test suites with minimal training and easily perform regression testing in constantly changing environments.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
Yes  
19091 Pruneridge Ave.  
Cupertino, CA 95014



#### ® HP QUALITY CENTER SOFTWARE

##### HP Software & Solutions

HP Quality Center software offers a single, web-based application that supports all essential aspects of test management. It provides a consistent, repeatable process for gathering requirements, planning and scheduling tests, analyzing

results and managing defects and issues. This software enables your organization to digitize specific quality processes and procedures within the larger application lifecycle. It also supports high levels of communication and collaboration among your IT team.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
Yes  
19091 Pruneridge Ave.  
Cupertino, CA 95014





#### HP QUICKTEST PROFESSIONAL SOFTWARE

##### HP Software & Solutions

HP QuickTest Professional supports functional and regression test automation that addresses every major software application environment. This solution uses the concept of keyword-driven testing to simplify test creation and maintenance. It enables testers to build functional and regression test cases by capturing flows directly from the application screens using specialized capturing technology. Test experts also have full access to the underlying test and object properties via an integrated scripting and debugging environment.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone	408.725.8900
training available	Yes
trial available	Yes
address	19091 Pruneridge Ave. Cupertino, CA 95014



#### HP SERVICE TEST SOFTWARE

##### HP Software & Solutions

HP Service Test software is a SOA testing solution that simplifies and accelerates the automated functional testing of SOA services. It reduces the time required to test SOA services and helps ensure that these services meet your business requirements prior to deployment. It enables your organization to simplify your testing processes and minimize the need for scripting by automating capabilities.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone	408.725.8900
training available	Yes
trial available	No
address	19091 Pruneridge Ave. Cupertino, CA 95014



#### IBM® RATIONAL® DOORS®

##### IBM Rational

IBM® Rational® DOORS®, the world's leading requirements management solution for advanced systems and software development

projects, helps you deliver higher quality systems and software by improving requirements communication, collaboration, and verification across the enterprise. DOORS is a multi-platform system designed to ensure conformance to requirements, and compliance to regulations by capturing, linking, analyzing, and managing changes to requirements and their traceability.

[www-01.ibm.com/software/awdtools/doors/](http://www-01.ibm.com/software/awdtools/doors/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone	914.499.1900
training available	Yes
trial available	Yes
address	1 New Orchard Rd. Armonk, NY 10504



#### IBM® RATIONAL® FOCAL POINT™

##### IBM Rational

Achieve Product Leadership Through Portfolio and Product Management with Rational Focal Point. IBM® Rational® Focal Point™ provides

a comprehensive decision support system for market- and business-driven product, project and portfolio management, that can help executives and teams to make the right decisions in order to deliver business, customer and market value.

[www-01.ibm.com/software/awdtools/focalpoint/](http://www-01.ibm.com/software/awdtools/focalpoint/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone	914.499.1900
training available	Yes
trial available	Yes
address	1 New Orchard Rd. Armonk, NY 10504



#### INFOSYS CLEARWARE

##### Infosys Technologies Limited

Infosys' Clearware, an end-to-end data warehouse test solution, is platform independent and supports multiple databases. An in-built DWT

strategy, and repository containing business rules and queries, auto-generates test scripts, which reduces dependency on skilled resources and enables participation of business users. It helps in data migration testing. Further, the tool's data query analyzer helps detect anomalies in data quality present in the databases. Infosys' Clearware helps reduce test effort and test cycle time drastically.

[www.infosys.com/testing-services](http://www.infosys.com/testing-services)

[vasudeva\\_naidu@infosys.com](mailto:vasudeva_naidu@infosys.com)

training available	Yes
trial available	Yes
address	44 Electronics City Hosur Road Bangalore, Karnataka 560100 India



## JAMA CONTOUR

### Jama Software

As the #1 Web-based requirements management software, Contour provides a powerful, collaborative solution to help companies build great software products. With Contour, you do not have to change your process and you achieve immediate benefits: **SPEED**—Contour cuts product planning and requirements management cycles in half. **ALIGNMENT**—Contour keeps your entire team in sync throughout the product development process. **QUALITY**—Contour helps you reduce costly errors and ensure high quality releases on time.

[www.jamasoftware.com/contour](http://www.jamasoftware.com/contour)

[cprusia@jamasoftware.com](mailto:cprusia@jamasoftware.com)

telephone  
training available  
trial available  
address

503.922.1058  
Yes  
Yes  
700 SW Taylor St.  
Suite 400  
Portland, OR 97201



## KOVAIR GLOBAL LIFECYCLE

### Kovair Software, Inc.

With adaptive workflow and highly configurable process management, Kovair solutions are designed from the ground up as an integrated web-based platform enabling anytime, anywhere access. Kovair Global Lifecycle is a rich, configurable, global platform which includes a complete set of integrated tools and processes for managing the entire application lifecycle. Kovair Global Lifecycle's tools use a shared single repository and a common user interface, enabling seamless interoperability.

[www.kovair.com/products-ented.asp](http://www.kovair.com/products-ented.asp)

[sales@kovair.com](mailto:sales@kovair.com)

telephone  
training available  
trial available  
address

408.262.0200 ext. 2007  
Yes  
Yes  
1533 California Cir.  
Milpitas, CA 95035



## LDRA TESTBED

### LDRA Ltd.

Static analysis and code coverage tool for C, C++, Java, Ada83/Ada95 and Assembler (Intel, Freescale, Texas Instruments). Static

analysis features include code visualisation, programming standards checking and complexity metrics. Code coverage is available for different coverage levels including MC/DC level A for the DO-178B standard, regression testing and available for any host/target environment.

[www.ldra.com/testbed.asp](http://www.ldra.com/testbed.asp)

[jonathan.kelly@ldra.com](mailto:jonathan.kelly@ldra.com)

telephone  
training available  
trial available  
address

44.0.151.649.9300  
Yes  
Yes  
Portside, Monks Ferry  
Wirral, CH41 5LH  
United Kingdom



## SONATA SOFTWARE

## MANAGED TESTING SERVICES

### Sonata Software Limited

Sonata Software is a global IT consulting and Services Company with a deep focus on software testing. Sonata's independent testing practice provides independent validation and verification services to its global clientele. Sonata follows a three point strategy which includes a consulting led approach, IP enabled solutions and

optimized delivery models to deliver value. Sonata's Testing services include: Test Consulting, Functional Testing, Performance Testing, Test Automation, ERP Testing, Security Testing and Compatibility Testing.

[www.sonata-software.com](http://www.sonata-software.com)

[amit.kumar@sonata-software.com](mailto:amit.kumar@sonata-software.com)

telephone  
training available  
trial available  
address

91.80.26610330  
No  
Yes  
APS Trust Building  
Bangalore, Karnataka  
560019 India



## McCABE CM—TRUECHANGE

### McCabe Software

McCabe CM is the only Software Change and Configuration Management solution to utilize "Integrated Difference"

technology, providing an intuitive and logical approach to managing software versioning and changes. The drag-and-drop stream view allows you to securely apply change across the application lifecycle in seconds instead of days. McCabe CM helps you manage your change process, speed application delivery, and ultimately improve the quality of your software, all at a lower total cost of ownership.

[www.mccabe.com/cm.htm](http://www.mccabe.com/cm.htm)

[jpalmisano@mccabe.com](mailto:jpalmisano@mccabe.com)

telephone  
training available  
trial available  
address

401.572.3100  
Yes  
Yes  
41 Sharpe Dr.  
Cranston, RI 02920



**mingle**®

Agile Project Management

MINGLE

ThoughtWorks Studios

Changing business priorities. Mingle's usability-rich interface empowers your global development team with a shared team space. Your team can easily collaborate in a thousand ad hoc

ways, based on your defined baseline process such as Scrum, XP, and Hybrid. As Mingle is used day-to-day by your entire team it contains complete, real-time and true-to-life project activity. This provides your entire team visibility to ensure that projects/programs are in line with business vision.

[studios.thoughtworks.com/mingle-agile-project-management](http://studios.thoughtworks.com/mingle-agile-project-management)

[studios@thoughtworks.com](mailto:studios@thoughtworks.com)

telephone  
training available  
trial available  
address

512.382.5017  
Yes  
Yes  
Market Street  
SpearTower  
35th Floor  
San Francisco, CA  
94105

**MKS**

MKS INTEGRITY—REQUIREMENTS MANAGEMENT WITHIN ALM™

MKS Inc.

With MKS Integrity, Requirements Management be-

comes an interconnected part of the lifecycle as part of an Intelligent ALM™ solution. Going beyond simple requirements capture, MKS Integrity fosters collaboration between business stakeholders, developers and testers. Changes can easily be assessed before they are implemented (across projects). Reuse and requirements change management capabilities are coupled with real-time metrics and full traceability, leading to superior quality, full auditability and more rapid time-to-market.

[www.mks.com/products/requirements](http://www.mks.com/products/requirements)

[sales@mks.com](mailto:sales@mks.com)

telephone  
training available  
trial available  
address

519.884.2251  
Yes  
No  
410 Albert St.  
Waterloo, Ontario  
N2L 3V3 Canada

**MKS**

MKS INTEGRITY—A SOLUTION FOR AGILE IN THE ENTERPRISE

MKS Inc.

MKS Integrity is a single software platform that ad-

dresses the end-to-end lifecycle of Agile software development, from epics and user stories to defects and change requests to test and release management. As a single source of truth for all development activities and assets MKS Integrity enables the flexibility and collaboration needed for Agile while ensuring management transparency and control across Agile and traditional teams, smoothing the transition and addressing the challenges of scaling Agile to the enterprise.

[www.mks.com/solutions/agile\\_development](http://www.mks.com/solutions/agile_development)

[sales@mks.com](mailto:sales@mks.com)

telephone  
training available  
trial available  
address

519.884.2251  
Yes  
No  
410 Albert St.  
Waterloo, Ontario  
N2L 3V3 Canada



Software Risk Management Services

MSTAR—MOSAIC

Mosaic, Inc.

MSTAR® is the industry's most advanced testing process.

This intranet-ready repository provides complete field-proven guidelines, templates, and samples for a risk-based and measurable testing process. MSTAR® also enables successful test automation with a tool-independent automation architecture proven to reduce maintenance and resource costs while dramatically improving long-term benefits. MSTAR® includes complete guidelines for reusable test planning and test data management. It covers all test levels including performance.

[www.mosaicinc.com/mosaicinc/mstar.asp](http://www.mosaicinc.com/mosaicinc/mstar.asp)

[kjohns@mosaicinc.com](mailto:kjohns@mosaicinc.com)

telephone  
training available  
trial available  
address

312.819.2220  
Yes  
No  
205 N Michigan Ave.  
Suite 2211  
Chicago, IL 60601



OPENMAKE MEISTER

OpenMake Software

OpenMake Meister is the leading build automation solution for the enterprise.

Going beyond simple workflow, Meister accelerates, simplifies and standardizes software builds across a wide range of programming languages and plat-

forms. The Meister build automation solution provides dependency analysis, build script generation, and detailed audit reports to ensure that software is built and delivered to exacting standards. Out-of-the-box integrations are provided for all leading commercial and open source SCM, testing and deployment tools.

[www.openmakesoftware.com](http://www.openmakesoftware.com)

[mark.manzo@openmakesoftware.com](mailto:mark.manzo@openmakesoftware.com)

telephone  
training available  
trial available  
address

503.475.9292  
Yes  
Yes  
213 W Institute Place  
#404  
Chicago, IL 60610

## CATALYSIS GROUP

sponsoring executives. Courses range from fundamentals of project management through advanced topics of risk, sponsorship and quality.  
payson@catalysisgroup.com

### PROJECT MANAGEMENT TRAINING SERVICES

#### Catalysis Group, Inc.

Catalysis Group provides on-site project management training for project managers, project team members, and

telephone  
training available  
trial available  
address

916.929.3629  
Yes  
Yes  
374 Santa Ynez Way  
Sacramento, CA 95816



## Original Software

Qualify is a complete Application Quality Management (AQM) solution that unites all aspects of the Quality lifecycle from requirements through to release. With a communication and collaboration backbone and a full workflow engine that can be modeled to individual business processes and methodologies, Qualify encompasses requirements, planning and scheduling, resource management, test execution, defect management and reporting within one platform.  
www.origsoft.com/products/qualify/  
solutions@origsoft.com

### QUALIFY

#### Original Software

Qualify is a complete Application Quality Management (AQM) solution that unites all aspects of the Quality lifecycle from requirements through to release. With a communication and collaboration backbone and a full

telephone  
training available  
trial available  
address

44.0.1256.338.666  
Yes  
No  
Grove House  
Chineham Court  
Basingstoke, Hants  
RG24 8AG  
United Kingdom



Scaling Software Agility

Rally is the leader in Agile application lifecycle management (ALM) dedicated to making leaner development organizations that respond faster to changing customer needs. According to a QSMA study, teams that rely on Rally are 50% faster to market and 25% more productive than industry averages. Rally's products were honored with four Jolt Awards in 2006, 2007, 2008 and 2009. Rally currently supports more than 1,600 corporate customers, 42,000 projects and 63,000 users in 50 countries. For more information, visit www.rallydev.com.  
www.rallydev.com/agile\_products  
info@rallydev.com

### RALLY COMMUNITY EDITION

#### Rally Software Development

Rally is the leader in Agile application lifecycle management (ALM) dedicated to making leaner development organizations that respond faster to changing customer needs. According to a QSMA study, teams that rely on Rally are 50%

telephone  
training available  
trial available  
address

303.565.2800  
Yes  
Yes  
4001 Discovery Dr.  
Suite 220  
Boulder, CO 80303



Scaling Software Agility

Rally is the leader in Agile application lifecycle management (ALM) dedicated to making leaner development organizations that respond faster to changing customer needs. According to a QSMA study, teams that rely on Rally are 50% faster to market and 25% more productive than industry averages. Rally's products were honored with four Jolt Awards in 2006, 2007, 2008 and 2009. Rally currently supports more than 1,600 corporate customers, 42,000 projects and 63,000 users in 50 countries. For more information, visit www.rallydev.com.  
www.rallydev.com/agile\_products  
info@rallydev.com

### RALLY ENTERPRISE EDITION

#### Rally Software Development

Rally is the leader in Agile application lifecycle management (ALM) dedicated to making leaner development organizations that respond faster to changing customer needs. According to a QSMA study, teams that rely on Rally are 50%

telephone  
training available  
trial available  
address

303.565.2800  
Yes  
Yes  
4001 Discovery Dr.  
Suite 220  
Boulder, CO 80303



## Ranorex

Ranorex is a Windows UI test automation framework for testing many different application types including Web 2.0 applications, WPF, Silverlight, Adobe Flash/Flex, .NET and Java. The Ranorex Recorder enables capture/replay of UI tests, edit actions and generates real C#, VB.NET and IronPython code. Ranorex object repositories enable separation of test automation code/recordings from RanorexPath identification information. The IDE includes test project management, intuitive code editor, code completion, debugging, and watch monitor.

www.ranorex.com  
info@ranorex.com

### RANOREX GUI TEST AUTOMATION FRAMEWORK

#### Ranorex

Ranorex is a Windows UI test automation framework for testing many different application types including Web 2.0

telephone  
training available  
trial available  
address

43.316.28.13.28  
Yes  
Yes  
Strassgangerstr. 289  
Graz, Steiermark  
8054 Austria





SEENowDo.COM

BigVisible Solutions

SeeNowDo provides simple, flexible virtual taskboards designed specifically to meet the needs of distributed

Agile and Scrum teams. This highly interactive collaboration tool provides instant updates to all project users. The "Instant Sync" capability allows individuals to take advantage of collaborative taskboards across distributed teams in real-time. No Downloads. No lag. No delays. No annoying ads. Completely Free.

[www.SeeNowDo.com](http://www.SeeNowDo.com)

[gmorein@bigvisible.com](mailto:gmorein@bigvisible.com)

telephone  
training available  
trial available  
address

617.216.3621  
No  
No  
1306 Columbia Rd.  
Suite 4A  
Boston, MA 02127



Test Automation Made Easy

SMARTEQM

SmarteSoft Inc.

SmarteQM is an integrated QA test lifecycle management system that manages projects, requirements,

releases, test cases, issues, defects, and tasks in one unified environment. By combining QA Management, Project Management, Deployment Management, and Defect Tracking, and by integrating with a wide variety of third party and open source tools, SmarteQM allows you to take control of your project lifecycle and synchronize development and testing.

[www.smartesoftware.com/products\\_smarteQM.php](http://www.smartesoftware.com/products_smarteQM.php)

[gary.bowers@smartesoftware.com](mailto:gary.bowers@smartesoftware.com)

telephone  
training available  
trial available  
address

512.782.9406  
Yes  
No  
3200 Steck Ave.  
Suite 260  
Austin, TX 78757



Software Planner

[www.softwareplanner.com](http://www.softwareplanner.com)

SOFTWARE PLANNER

AutomatedQA

Software Planner is an award winning application lifecycle management (ALM) tool that helps you manage all of software development like customer requirements, project deliverables, test cases, defects and sup-

port tickets. Coupled with collaborative tools like document sharing, team calendars, interactive dashboards, knowledge bases and threaded discussions, teams communicate effectively and quickly deliver high quality software. Trusted by 70K+ users in 24 countries and customers like Acer Computers and Procter and Gamble.

[www.softwareplanner.com](http://www.softwareplanner.com)

[sales@pragmaticsw.com](mailto:sales@pragmaticsw.com)

telephone  
training available  
trial available  
address

800.773.7785  
Yes  
Yes  
383 Inverness Parkway  
Suite 280  
Englewood, CO 80112



QUALITY INTELLIGENCE

Intelligence about software quality, intelligently applied

SOFTWARE TEST CONSULTING AND MANAGEMENT

Quality Intelligence Inc.

Test Consulting: I work with managers and teams to

identify the specific business challenges of software implementation in your organization, and determine which of those risks can be addressed by software testing and test management. I recommend practices that will cover your risks, with a practical roadmap and coaching for achievable improvements. If testing is in trouble, I work with your team to get it back on track. Test Management: I manage testing on challenging projects, specializing in large-scale systems integration testing.

[fiona.charles@quality-intelligence.com](mailto:fiona.charles@quality-intelligence.com)

training available  
trial available

Yes  
Yes



SURROUND SCM

Seapine Software

Surround SCM, a scalable, cross-platform software

configuration management solution, keeps source code and digital assets organized as it tracks change throughout your organization. Simple to configure and maintain, Surround features advanced branching, configurable workflows, user-definable fields, secure remote access, and easy integration into development and build processes. It also includes Unicode and WebDAV support, in-application triggers, email notifications, and an optional proxy server for distributed teams.

[www.seapine.com/surroundscm.html](http://www.seapine.com/surroundscm.html)

[sales@seapine.com](mailto:sales@seapine.com)

telephone  
training available  
trial available  
address

513.754.1655  
Yes  
Yes  
5412 Courseview Dr.  
Suite 200  
Mason, OH 45040



## TBREQ

LDRA Ltd.

TBreq is a unique solution that can help development teams overcome the challenges of mapping test specifications, unit testing

scenarios, test data and code coverage verification back to their high level design requirements. TBreq interfaces directly with management tools such as IBM® Telelogic® DOORS®, IBM® Rational® RequisitePro®, Microsoft® Word documents or Excel spreadsheets in order to ensure traceability across the complete software lifecycle thus verifying the completeness of the requirements coverage.

[www.ldra.com/tbreq.asp](http://www.ldra.com/tbreq.asp)

[jonathan.kelly@ldra.com](mailto:jonathan.kelly@ldra.com)

telephone  
training available  
trial available  
address

44.0.151.649.9300  
Yes  
Yes  
Portside, Monks Ferry  
Wirral, CH41 5LH  
United Kingdom



## TBRUN

LDRA Ltd.

TBrun is LDRA's automated unit testing tool. The functionality within TBrun includes a GUI interface which automates the production of

test data vectors (by using TBeXtreme) whilst test harness and stub generation is completely automatic. It also produces the test documentation and other reports. Automatic generation of test data vectors can be provided by TBeXtreme for robustness, test scenarios and support of black-box, white-box and object-box testing.

[www.ldra.com/tbrun.asp](http://www.ldra.com/tbrun.asp)

[jonathan.kelly@ldra.com](mailto:jonathan.kelly@ldra.com)

telephone  
training available  
trial available  
address

44.0.151.649.9300  
Yes  
Yes  
Portside, Monks Ferry  
Wirral, CH41 5LH  
United Kingdom



## TBVISION

LDRA Ltd.

TBvision provides transparency into source code, enabling managers, teams and developers to better monitor testing, quality metrics,

memory errors and security vulnerabilities. Recognising the increased need for graphical ability to show code quality, fault detection and avoidance measures, TBvision incorporates next-generation reporting capabilities. As a highly flexible solution, TBvision provides users with the ability to quickly and easily view results in call graphs, flow graphs and code review reports for graphical feedback.

[www.ldra.com/tbvision.asp](http://www.ldra.com/tbvision.asp)

[jonathan.kelly@ldra.com](mailto:jonathan.kelly@ldra.com)

telephone  
training available  
trial available  
address

44.0.151.649.9300  
Yes  
Yes  
Portside, Monks Ferry  
Wirral, CH41 5LH  
United Kingdom



## TESTTRACK PRO

Seapine Software

TestTrack Pro, a scalable, cross-platform issue man-

agement solution, facilitates team collaboration across the enterprise. Simple to install, easy to use and maintain, TestTrack Pro features comprehensive workflow and process automation rules, powerful filters, escalation rules, email tracking, reports, and role-based security. It also includes extensive customizations, seamless integration with current development tools, and support for MS SQL Server, Oracle, and MySQL. Keep team members informed and on schedule with TestTrack Pro.

[www.seapine.com/ttpro.html](http://www.seapine.com/ttpro.html)

[sales@seapine.com](mailto:sales@seapine.com)

telephone  
training available  
trial available  
address

513.754.1655  
Yes  
Yes  
5412 Courseview Dr.  
Suite 200  
Mason, OH 45040



## TINYPM

Agilers

tinyPM —lightweight browser-based agile project management tool created with usability in mind.

Perfect for distributed as well as collocated teams working on a daily basis with backlog, visual task board, user stories estimated in points, burndown charts (for both scope and budget tracking). Open to integration with your existing environment through its API over HTTP. Making your project data visible to all project stakeholders and team members has never been so easy! tinyPM Community Edition is FREE up to 5 users.

[www.tinypm.com](http://www.tinypm.com)

[support@tinypm.com](mailto:support@tinypm.com)

telephone  
training available  
trial available  
address

48606132369  
No  
Yes  
Zabrodzka 1d/6  
Wroclaw, 52-336  
Poland



#### TR SIZER

Mosaic, Inc.

TR Sizer is a measurement repository and software sizing tool that supports an alternative sizing measure—testable requirements (TRs). TRs are an intuitive, flexible, easily implemented and powerful alternative to function points and lines of code. Measuring system size enables more reliable estimates, enhanced change control, increased accountability for outsourced work, more effective EVM and improved measurement of quality and productivity. Based on requirements, the TR measure also highlights and helps manage requirement risk.

[www.testablerequirements.com](http://www.testablerequirements.com)

[kjohns@mosaicinc.com](mailto:kjohns@mosaicinc.com)

telephone	312.819.2220
training available	Yes
trial available	No
address	205 N Michigan Ave. Suite 2211 Chicago, IL 60601



#### TRUEPLANNING

PRICE Systems

How often are project delivery dates set without a realistic understanding of how long they will actually take to complete? TruePlanning offers valuable insight and planning capabilities for delivering features and functionality. TruePlanning allows you to isolate requirements in a product breakdown structure (PBS) in order to generate cost & schedule estimates and conduct rapid "what if" analysis. This gives organizations the ability to prioritize and select requirements that can realistically be delivered on time and on budget.

[www.pricesystems.com/products/sqe](http://www.pricesystems.com/products/sqe)

[brett.schultz@pricesystems.com](mailto:brett.schultz@pricesystems.com)

telephone	800.43.PRICE
training available	Yes
trial available	Yes
address	17000 Commerce Pkwy. Mount Laurel, NJ 08054



#### V1: AGILE ENTERPRISE BY VERSIONONE

VersionOne

To help ensure success using Agile methodologies, enterprises worldwide have made V1: Agile Enterprise the #1 Agile project management software choice for any type of Agile methodology. V1: Agile Enterprise is an easy-to-use, centralized agile planning and management system that is perfect for multi-team, multi-project organizations as well as experienced agile teams. With integrated agile processes and improved alignment between business and IT, V1: Agile Enterprise is the most scalable, flexible, and informative tool on the market.

[www.versionone.com/products.asp](http://www.versionone.com/products.asp)

[Richard.Fuller@versionone.com](mailto:Richard.Fuller@versionone.com)

telephone	678.268.3320
training available	Yes
trial available	Yes
address	6220 Shiloh Rd. Suite 400 Alpharetta, GA 30005



#### V1: AGILE TEAM BY VERSIONONE

VersionOne

V1: Agile Team combines VersionOne's industry-leading

Agile project management expertise with the needs of small team who are new to Agile. By focusing on core Agile concepts—team collaboration, continuous planning and incremental delivery—we've created a streamlined solution that gives teams everything they need to quickly and easily get started with Agile planning, tracking and reporting. With V1: Agile Team, your team will stay on schedule and deliver software on time.

[www.versionone.com/products\\_V1Team\\_Overview.asp](http://www.versionone.com/products_V1Team_Overview.asp)

[Richard.Fuller@versionone.com](mailto:Richard.Fuller@versionone.com)

telephone	678.268.3320
training available	Yes
trial available	No
address	6220 Shiloh Rd. Suite 400 Alpharetta, GA 30005



*Better Software* magazine and StickyMinds.com offer Web seminars that feature free

informational sessions brought to you by experts who've created, tested, and refined solutions to common pitfalls in software development. Our one-hour Web seminars allow you to discover industry best practices, achieve professional growth, interact through Q&A polls, master tips

and techniques to solve your software development issues, and more—straight from your desktop. It's easy to sign up and participate, just visit

[www.stickyminds.com/webseminars](http://www.stickyminds.com/webseminars) to view up-coming and on-demand Web seminars.



#### BENDER RBT TEST CASE DESIGN TOOL

Bender RBT Inc.

BenderRBT has two test design engines: Cause-Effect Graphing and Pair Wise. The Graphing engine is the only test tool that designs tests that ensure that defects are propagated to an observable point. Its tests maximize coverage while minimizing the number of tests. It does a logical consistency check on the requirements and can generate an as built spec from the test model—critical for agile projects. The Pair

Wise engine supports both orthogonal pairs and optimized pairs. Both engines do strong negative testing.

[rbender@benderrbt.com](mailto:rbender@benderrbt.com)

training available  
trial available  
address

Yes  
Yes  
17 Cardinale Lane  
Queensbury, NY 12804



#### BUGHOST HOSTED BUG TRACKING AND ISSUE MANAGEMENT SYSTEM

Variad Corporation

Available to enterprise customers and small businesses,  
BugHost provides world-class solutions for bug tracking and

project management: unlimited user and project licenses, requirements documents and change requests, individual and project-level task tracking, custom reports, email notifications, custom fields, customizable discussion forum, file system, test case management & logging, and much more! With so many features ... Bug Tracking, Requirements, Writing Test Cases, Task Tracking, Scheduling, Management ... just got easier!

[www.bughost.com](http://www.bughost.com)

[info@bughost.com](mailto:info@bughost.com)

telephone  
training available  
trial available  
address

503.345.4349  
No  
Yes  
PO Box 3106  
Portland, OR 97208



(A MICRO FOCUS COMPANY)

#### CALIBERRM™

Borland (a Micro Focus Company)

CaliberRM is an enterprise software requirements management tool that facilitates collaboration, impact analysis and communication,

enabling software teams to deliver on key project milestones with greater accuracy and predictability. CaliberRM also helps small, large and distributed organizations ensure that applications meet end users' needs by allowing analysts, developers, testers and other project stakeholders to capture and communicate the "users" voice throughout the application lifecycle.

[www.microfocus.com/products/CaliberRM/index.asp](http://www.microfocus.com/products/CaliberRM/index.asp)

[requirements@microfocus.com](mailto:requirements@microfocus.com)

telephone  
training available  
trial available  
address

512.340.2200  
Yes  
Yes  
400 Interstate Parkway  
Suite 1600  
Atlanta, GA 30339



#### HP CENTER MANAGEMENT FOR QUALITY CENTER

HP Software & Solutions

HP Center Management for Quality Center software helps your organization manage HP Quality Center software as a shared Center of Excellence. The combination of proven best practices and HP Project and Portfolio Management

software enables your organization to conquer your quality management challenges. You can manage application project lifecycle and quality assurance test phases, resources and skill sets; automate project and resource management processes; and improve center administration and management.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
No  
19091 Pruneridge Ave.  
Cupertino, CA 95014



#### HP QUALITY CENTER SOFTWARE

HP Software & Solutions

HP Quality Center software offers a single, web-based application that supports all essential aspects of test management. It provides a consistent, repeatable process for gathering requirements, planning and scheduling tests, analyzing

results and managing defects and issues. This software enables your organization to digitize specific quality processes and procedures within the larger application lifecycle. It also supports high levels of communication and collaboration among your IT team.

[www.hp.com/go/software](http://www.hp.com/go/software)

[vw@hp.com](mailto:vw@hp.com)

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
Yes  
19091 Pruneridge Ave.  
Cupertino, CA 95014





#### IBM® RATIONAL® DOORS®

IBM Rational

IBM® Rational® DOORS®, the world's leading requirements management solution for advanced systems and software development

projects, helps you deliver higher quality systems and software by improving requirements communication, collaboration, and verification across the enterprise. DOORS is a multi-platform system designed to ensure conformance to requirements, and compliance to regulations by capturing, linking, analyzing, and managing changes to requirements and their traceability.

[www-01.ibm.com/software/awdtools/doors/](http://www-01.ibm.com/software/awdtools/doors/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504



#### IBM® RATIONAL® FOCAL POINT™

IBM Rational

Achieve Product Leadership Through Portfolio and Product Management with Rational Focal Point. IBM® Rational® Focal Point™ provides

a comprehensive decision support system for market- and business-driven product, project and portfolio management, that can help executives and teams to make the right decisions in order to deliver business, customer and market value.

[www-01.ibm.com/software/awdtools/focalpoint/](http://www-01.ibm.com/software/awdtools/focalpoint/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504



#### IBM® RATIONAL® FUNCTIONAL TESTER

IBM Rational

IBM® Rational® Functional Tester is an advanced, automated functional and regression testing tool for testers and GUI developers who need

superior control for testing Java, VS.NET and Web-based applications. Business Analysts can jumpstart test earlier in the lifecycle with visual storyboarding that uses natural language and rendered screenshots to create, edit, and execute tests.

[www-01.ibm.com/software/awdtools/tester/functional/index.html](http://www-01.ibm.com/software/awdtools/tester/functional/index.html)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504



#### IBM® RATIONAL® REQUIREMENTS COMPOSER

IBM Rational

Rational® Requirements Composer is a Jazz-built requirements solution that enables stakeholders to collaborate in context to define and

manage high-quality requirements using a variety of visual and textual techniques. Rational Requirements Composer integrates with Rational Team Concert and Rational Quality Manager, enabling project teams to shorten planning cycles and reduce rework by aligning development and test effort with requirements and business objectives.

[www.ibm.com/software/awdtools/rrc/](http://www.ibm.com/software/awdtools/rrc/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504



#### IBM® RATIONAL® SYSTEMS TESTER

IBM Rational

IBM® Rational® Systems Tester provides systems and integration testing of the software development lifecycle. Rational Tester provides

off-the-shelf automated testing, enabling users to execute tests quickly and repeatedly to maximize quality, while supporting the software test lifecycle—from test design to development, analysis, execution, and debugging—from a single desktop.

[www-01.ibm.com/software/awdtools/ttester/](http://www-01.ibm.com/software/awdtools/ttester/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504



POWERED BY INTELLECT  
DRIVEN BY VALUES

#### INFOSYS CLEARWARE

##### Infosys Technologies Limited

Infosys' Clearware, an end-to-end data warehouse test solution, is platform independent and supports multiple databases. An in-built DWT

strategy, and repository containing business rules and queries, auto-generates test scripts, which reduces dependency on skilled resources and enables participation of business users. It helps in data migration testing. Further, the tool's data query analyzer helps detect anomalies in data quality present in the databases. Infosys' Clearware helps reduce test effort and test cycle time drastically.

[www.infosys.com/testing-services](http://www.infosys.com/testing-services)

[vasudeva\\_naidu@infosys.com](mailto:vasudeva_naidu@infosys.com)

training available  
trial available  
address

Yes  
Yes  
44 Electronics City  
Hosur Road  
Bangalore, Karnataka  
560100 India



#### JAMA CONTOUR

##### Jama Software

As the #1 Web-based requirements management software, Contour provides a powerful, collaborative solution to help companies build great software products. With Contour, you do not have to change your process

and you achieve immediate benefits: SPEED—Contour cuts product planning and requirements management cycles in half. ALIGNMENT—Contour keeps your entire team in sync throughout the product development process. QUALITY—Contour helps you reduce costly errors and ensure high quality releases on time.

[www.jamasoftware.com/contour](http://www.jamasoftware.com/contour)

[cprusia@jamasoftware.com](mailto:cprusia@jamasoftware.com)

telephone  
training available  
trial available  
address

503.922.1058  
Yes  
Yes  
700 SW Taylor St.  
Suite 400  
Portland, OR 97201



#### KOVAIR GLOBAL LIFECYCLE

##### Kovair Software, Inc.

With adaptive workflow and highly configurable process management, Kovair solutions are designed from the ground up as an integrated web-based platform enabling anytime, anywhere access. Kovair Global Lifecycle is a rich, configurable, global platform which includes a complete set of integrated tools and processes for managing the entire application lifecycle. Kovair Global Lifecycle's tools use a shared single repository and a common user interface, enabling seamless interoperability.

[www.kovair.com/products-ented.asp](http://www.kovair.com/products-ented.asp)

[sales@kovair.com](mailto:sales@kovair.com)

telephone  
training available  
trial available  
address

408.262.0200 ext. 2007  
Yes  
Yes  
1533 California Cir.  
Milpitas, CA 95035



#### MKS INTEGRITY—REQUIREMENTS MANAGEMENT WITHIN ALM™

##### MKS Inc.

With MKS Integrity, Requirements Management be-

comes an interconnected part of the lifecycle as part of an Intelligent ALM™ solution. Going beyond simple requirements capture, MKS Integrity fosters collaboration between business stakeholders, developers and testers. Changes can easily be assessed before they are implemented (across projects). Reuse and requirements change management capabilities are coupled with real-time metrics and full traceability, leading to superior quality, full auditability and more rapid time-to-market.

[www.mks.com/products/requirements](http://www.mks.com/products/requirements)

[sales@mks.com](mailto:sales@mks.com)

telephone  
training available  
trial available  
address

519.884.2251  
Yes  
No  
410 Albert St.  
Waterloo, Ontario  
N2L 3V3 Canada



#### Original Software

#### QUALIFY

##### Original Software

Qualify is a complete Application Quality Management (AQM) solution that unites all aspects of the Quality lifecycle from requirements through to release. With a communication and collaboration backbone and a full

workflow engine that can be modeled to individual business processes and methodologies, Qualify encompasses requirements, planning and scheduling, resource management, test execution, defect management and reporting within one platform.

[www.origsoft.com/products/qualify/](http://www.origsoft.com/products/qualify/)

[solutions@origsoft.com](mailto:solutions@origsoft.com)

telephone  
training available  
trial available  
address

44.0.1256.338.666  
Yes  
No  
Grove House  
Chineham Court  
Basingstoke, Hants  
RG24 8AG  
United Kingdom



Scaling Software Agility

#### RALLY COMMUNITY EDITION

##### Rally Software Development

Rally is the leader in Agile application lifecycle management (ALM) dedicated to making leaner development organizations that respond faster to changing customer needs. According to a QSMA study, teams that rely on Rally are 50% faster to market and 25% more productive than industry averages. Rally's products were honored with four Jolt Awards in 2006, 2007, 2008 and 2009. Rally currently supports more than 1,600 corporate customers, 42,000 projects and 63,000 users in 50 countries. For more information, visit [www.rallydev.com](http://www.rallydev.com).

[www.rallydev.com/agile\\_products](http://www.rallydev.com/agile_products)

[info@rallydev.com](mailto:info@rallydev.com)

telephone	303.565.2800
training available	Yes
trial available	Yes
address	4001 Discovery Dr. Suite 220 Boulder, CO 80303



Scaling Software Agility

#### RALLY ENTERPRISE EDITION

##### Rally Software Development

Rally is the leader in Agile application lifecycle management (ALM) dedicated to making leaner development organizations that respond faster to changing customer needs. According to a QSMA study, teams that rely on Rally are 50% faster to market and 25% more productive than industry averages. Rally's products were honored with four Jolt Awards in 2006, 2007, 2008 and 2009. Rally currently supports more than 1,600 corporate customers, 42,000 projects and 63,000 users in 50 countries. For more information, visit [www.rallydev.com](http://www.rallydev.com).

[www.rallydev.com/agile\\_products](http://www.rallydev.com/agile_products)

[info@rallydev.com](mailto:info@rallydev.com)

telephone	303.565.2800
training available	Yes
trial available	Yes
address	4001 Discovery Dr. Suite 220 Boulder, CO 80303



Test » Automation » » » Made Easy

#### SMARTEQM

##### SmarteSoft Inc.

SmarteQM is an integrated QA test lifecycle management system that manages projects, requirements, releases, test cases, issues, defects, and tasks in one unified environment. By combining QA Management, Project Management, Deployment Management, and Defect Tracking, and by integrating with a wide variety of third party and open source tools, SmarteQM allows you to take control of your project lifecycle and synchronize development and testing.

[www.smartsoft.com/products\\_smarteQM.php](http://www.smartsoft.com/products_smarteQM.php)

[gary.bowers@smartsoft.com](mailto:gary.bowers@smartsoft.com)

telephone	512.782.9406
training available	Yes
trial available	No
address	3200 Steck Ave. Suite 260 Austin, TX 78757



Software Planner  
[www.softwareplanner.com](http://www.softwareplanner.com)

#### SOFTWARE PLANNER

##### AutomatedQA

Software Planner is an award winning application lifecycle management (ALM) tool that helps you manage all of software development like customer requirements, project deliverables, test cases, defects and support tickets. Coupled with collaborative tools like document sharing, team calendars, interactive dashboards, knowledge bases and threaded discussions, teams communicate effectively and quickly deliver high quality software. Trusted by 70K+ users in 24 countries and customers like Acer Computers and Procter and Gamble.

[www.softwareplanner.com](http://www.softwareplanner.com)

[sales@pragmaticsww.com](mailto:sales@pragmaticsww.com)

telephone	800.773.7785
training available	Yes
trial available	Yes
address	383 Inverness Parkway Suite 280 Englewood, CO 80112



#### TBREQ

##### LDRA Ltd.

TBreq is a unique solution that can help development teams overcome the challenges of mapping test specifications, unit testing scenarios, test data and code coverage verification back to their high level design requirements. TBreq interfaces directly with management tools such as IBM® Telelogic® DOORS®, IBM® Rational® RequisitePro®, Microsoft® Word documents or Excel spreadsheets in order to ensure traceability across the complete software lifecycle thus verifying the completeness of the requirements coverage.

[www.ldra.com/tbreq.asp](http://www.ldra.com/tbreq.asp)

[jonathan.kelly@ldra.com](mailto:jonathan.kelly@ldra.com)

telephone	44.0.151.649.9300
training available	Yes
trial available	Yes
address	Portside, Monks Ferry Wirral, CH41 5LH United Kingdom

## Borland® TEAMDEFINE™

(A MICRO FOCUS COMPANY)

Borland (a Micro Focus Company)

TeamDefine is a powerful and intuitive tool for defining requirements through interactive, web based simulations which allow technical and non-technical users to better communicate and remove the ambiguity from defining requirements. TeamDefine caters to the four process areas of requirements definition including elicitation, analysis, specification and validation and enables teams to see and experience the applications they want to build before they go to production, ensuring that the right application is built the first time.

[www.microfocus.com/products/TeamDefine/index.asp](http://www.microfocus.com/products/TeamDefine/index.asp)  
[requirements@microfocus.com](mailto:requirements@microfocus.com)

telephone  
training available  
trial available  
address

512.340.2200  
Yes  
Yes  
400 Interstate Parkway  
Suite 1600  
Atlanta, GA 30339

## tinypm

TINYPM

Agilers

tinyPM —lightweight browser-based agile project management tool created with usability in mind.

Perfect for distributed as well as collocated teams working on a daily basis with backlog, visual task board, user stories estimated in points, burndown charts (for both scope and budget tracking). Open to integration with your existing environment through its API over HTTP. Making your project data visible to all project stakeholders and team members has never been so easy! tinyPM Community Edition is FREE up to 5 users.

[www.tinypm.com](http://www.tinypm.com)  
[support@tinypm.com](mailto:support@tinypm.com)

telephone  
training available  
trial available  
address

48.60.613.2369  
No  
Yes  
Zabrodzka 1d/6  
Wroclaw, 52-336  
Poland



Software Risk Management Services

TR SIZER

Mosaic, Inc.

TR Sizer is a measurement repository and software sizing tool

that supports an alternative sizing measure—testable requirements (TRs). TRs are an intuitive, flexible, easily implemented and powerful alternative to function points and lines of code. Measuring system size enables more reliable estimates, enhanced change control, increased accountability for outsourced work, more effective EVM and improved measurement of quality and productivity. Based on requirements, the TR measure also highlights and helps manage requirement risk.

[www.testablerequirements.com](http://www.testablerequirements.com)  
[kjohns@mosaicinc.com](mailto:kjohns@mosaicinc.com)

telephone  
training available  
trial available  
address

312.819.2220  
Yes  
No  
205 N Michigan Ave.  
Suite 2211  
Chicago, IL 60601



by PRICE® Systems

TRUEPLANNING

PRICE Systems

How often are project delivery dates set without a realistic understanding of how long they will actu-

ally take to complete? TruePlanning offers valuable insight and planning capabilities for delivering features and functionality. TruePlanning allows you to isolate requirements in a product breakdown structure (PBS) in order to generate cost & schedule estimates and conduct rapid "what if" analysis. This gives organizations the ability to prioritize and select requirements that can realistically be delivered on time and on budget.

[www.pricesystems.com/products/sqe](http://www.pricesystems.com/products/sqe)  
[brett.schultz@pricesystems.com](mailto:brett.schultz@pricesystems.com)

telephone  
training available  
trial available  
address

800.43.PRICE  
Yes  
Yes  
17000 Commerce Pkwy.  
Mount Laurel, NJ 08054



twist®

Test Automation

Twist

ThoughtWorks Studios

Today's business world demands high-quality software that is thoroughly tested and completely aligned to the customer's needs. Twist combines both of these with its novel collaborative

testing platform. Twist sustains business focus by using business intent directly expressed by business users in their domain language as test specifications. Twist integrates quality with its feature-rich IDE that empowers testers to create, maintain and evolve both your automated and manual tests.

[studios.thoughtworks.com/agile-test-automation](http://studios.thoughtworks.com/agile-test-automation)  
[studios@thoughtworks.com](mailto:studios@thoughtworks.com)

telephone  
training available  
trial available  
address

512.382.5017  
Yes  
Yes  
Market Street  
SpearTower  
35th Floor  
San Francisco, CA  
94105





#### V1: AGILE ENTERPRISE BY VERSIONONE

VersionOne

To help ensure success using Agile methodologies,

enterprises worldwide have made V1: Agile Enterprise the #1 Agile project management software choice for any type of Agile methodology. V1: Agile Enterprise is an easy-to-use, centralized agile planning and management system that is perfect for multi-team, multi-project organizations as well as experienced agile teams. With integrated agile processes and improved alignment between business and IT, V1: Agile Enterprise is the most scalable, flexible, and informative tool on the market.

[www.versionone.com/products.asp](http://www.versionone.com/products.asp)

[Richard.Fuller@versionone.com](mailto:Richard.Fuller@versionone.com)

telephone	678.268.3320
training available	Yes
trial available	Yes
address	6220 Shiloh Rd. Suite 400 Alpharetta, GA 30005



#### V1: AGILE TEAM BY VERSIONONE

VersionOne

V1: Agile Team combines VersionOne's industry-leading

Agile project management expertise with the needs of small team who are new to Agile. By focusing on core Agile concepts—team collaboration, continuous planning and incremental delivery—we've created a streamlined solution that gives teams everything they need to quickly and easily get started with Agile planning, tracking and reporting. With V1: Agile Team, your team will stay on schedule and deliver software on time.

[www.versionone.com/products\\_V1Team\\_Overview.asp](http://www.versionone.com/products_V1Team_Overview.asp)

[Richard.Fuller@versionone.com](mailto:Richard.Fuller@versionone.com)

telephone	678.268.3320
training available	Yes
trial available	No
address	6220 Shiloh Rd. Suite 400 Alpharetta, GA 30005

## CodePro AnalytiX™

### CODEPRO ANALYTIX

Instantiations, Inc.

CodePro AnalytiX is the premier Java software

testing tool for Eclipse developers who want to improve the quality and security of their code. AnalytiX seamlessly integrates into the Eclipse environment, using automated static analysis to pinpoint and correct quality and security issues (includes 1200+ audit rules with over 225 OWASP standard-based security rules). AnalytiX also includes JUnit test generation and editing; code coverage and metrics; analysis for dependencies, duplicate or dead code; team collaboration tools and more.

[www.instantiations.com/codepro/analytix/about.html](http://www.instantiations.com/codepro/analytix/about.html)

[sales@instantiations.com](mailto:sales@instantiations.com)

telephone	503.598.4900
training available	Yes
trial available	Yes
address	18101 SW Boones Ferry Rd. Suite 200 Portland, OR 97224



*Leading the Evolution™*

### DATA EXPRESS®

Borland (a Micro Focus Company)

Data Express automates the management of test data—from the mainframe to distributed environments—to ensure that applications are thoroughly tested with "real" data. The technology

ensures compliance with data privacy regulations by masking sensitive information to avoid misuse or loss. It reduces storage costs by 90% by using subsets of live data for testing. And it slashes turnaround time on development tasks by speeding test data generation up to 80%.

[www.microfocus.com/products/DataExpress/](http://www.microfocus.com/products/DataExpress/)

[dataexpress@microfocus.com](mailto:dataexpress@microfocus.com)

telephone	512.340.2200
training available	Yes
trial available	No
address	400 Interstate Parkway Suite 1600 Atlanta, GA 30339

## Klocwork

### KLOCWORK INSIGHT

Klocwork Inc.

Klocwork source code analysis solutions

boost the productivity of software development teams while helping to ensure code security, quality and stability of complex code bases. Through proven static analysis techniques, Klocwork removes bottlenecks at the earliest stages of the software development process and enables software developers to find critical security vulnerabilities, quality defects and architectural issues quickly and accurately. More than 600 organizations have achieved higher code security and quality with Klocwork.

[www.klocwork.com/products/insight.asp](http://www.klocwork.com/products/insight.asp)

[kelly.duncan@klocwork.com](mailto:kelly.duncan@klocwork.com)

telephone  
training available  
trial available  
address

866.556.2967  
Yes  
Yes  
25 Burlington Mall Rd.  
Suite 300  
Burlington, MA 01803

## Klocwork

### KLOCWORK SOLO FOR JAVA

Klocwork Inc.

Klocwork Solo takes Klocwork's proven,

enterprise-ready, static source code analysis technology and packages it for the individual Java developer. With Klocwork Solo for Java, developers focused on mobile software development or web application development can find critical bugs and security vulnerabilities in their source code quickly and accurately.

[www.klocwork.com/products/Solo.asp](http://www.klocwork.com/products/Solo.asp)

[kelly.duncan@klocwork.com](mailto:kelly.duncan@klocwork.com)

telephone  
training available  
trial available  
address

866.556.2967  
No  
Yes  
25 Burlington Mall Rd.  
Suite 300  
Burlington, MA 01803



### McCABE IQ

McCabe Software

The McCabe IQ suite is made up of three multi-platform, multi-language software quality management solutions. McCabe IQ

Developers Edition visualizes the complexity of source code and provides a host of metrics with which to measure quality. McCabe IQ Test Team Edition identifies precisely what areas of code have been tested and facilitates improved test plans. McCabe Enterprise Edition provides all the functionality of the Developers and Test Team Editions, in addition to enterprise reporting and web-enabled test data collection.

[www.mccabe.com/iq.htm](http://www.mccabe.com/iq.htm)

[jpalmisano@mccabe.com](mailto:jpalmisano@mccabe.com)

telephone  
training available  
trial available  
address

401.572.3100  
Yes  
Yes  
41 Sharpe Dr.  
Cranston, RI 02920



### AGITARONE

Agitar Technologies, Inc.

AgitarOne helps you work safer, better, and smarter as you develop and maintain Java applications. AgitarOne JUnit Generator creates thorough JUnit tests on your code, with 80% coverage out of the box! It helps find regressions

and makes it safer and easier to improve code, reducing maintenance costs. AgitarOne Agitator helps you understand the behavior of your code as it is written, aiding the prevention of bugs and code complexity.

AgitarOne is the best way to create, use, and manage the unit tests that you need to be truly agile.

[www.agitar.com/solutions/products/agitarone.html](http://www.agitar.com/solutions/products/agitarone.html)

[jpalmisano@agitar.com](mailto:jpalmisano@agitar.com)

telephone  
training available  
trial available  
address

401.572.3150  
Yes  
Yes  
41 Sharpe Dr.  
Cranston, RI 02920

## AQtime

eliminate leaks and bottlenecks

AQTIME

AutomatedQA

AQtime is a performance profiler and memory debugger engineered to give developers unparalleled insight into all aspects of the performance of their applications. AQtime provides a single solution for detecting performance bottlenecks and memory leaks within managed, unmanaged and mixed-code applications. AQtime supports Microsoft Visual Studio, .NET, ASP.NET, C++, VB, Delphi, 32-bit, 64-bit and integrates tightly with TestComplete.

[www.automatedqa.com/aqtime](http://www.automatedqa.com/aqtime)

[sales@automatedqa.com](mailto:sales@automatedqa.com)

telephone  
training available  
trial available  
address

978.236.7900  
Yes  
Yes  
100 Cummings Center  
Suite 420B  
Beverly, MA 01915

## Automated Build Studio

simplify your deployment

AUTOMATED BUILD STUDIO

AutomatedQA

Automated Build Studio is a release management system that provides an easy and visual way to automate the software development build and deployment process. Users easily create visual macros by dragging and dropping pre-built operations. More than 500 built-in operations are available in a variety of categories.

[www.automatedqa.com/products/abs.asp](http://www.automatedqa.com/products/abs.asp)

[sales@automatedqa.com](mailto:sales@automatedqa.com)

telephone  
training available  
trial available  
address

978.236.7900  
Yes  
Yes  
100 Cummings Center  
Suite 420B  
Beverly, MA 01915



BENDER RBT TEST CASE DESIGN TOOL

Bender RBT Inc.

BenderRBT has two test design engines: Cause-Effect Graphing and Pair Wise. The Graphing engine is the only test tool that designs tests that ensure that defects are propagated to an observable point. Its tests maximize coverage while minimizing the number of tests. It does a logical consistency check on the requirements and can generate an as built spec from the test model—critical for agile projects. The Pair

Wise engine supports both orthogonal pairs and optimized pairs. Both engines do strong negative testing.  
[rbender@benderrbt.com](mailto:rbender@benderrbt.com)

training available  
trial available  
address

Yes  
Yes  
17 Cardinale Lane  
Queensbury, NY 12804

## CodePro AnalytiX™

CODEPRO ANALYTIX

Instantiations, Inc.

CodePro AnalytiX is the premier Java software testing tool for Eclipse developers who want to improve the quality and security of their code. AnalytiX seamlessly integrates into the Eclipse environment, using automated static analysis to pinpoint and correct quality and security issues (includes 1200+ audit rules with over 225 OWASP standard-based security rules). AnalytiX also includes JUnit test generation and editing; code coverage and metrics; analysis for dependencies, duplicate or dead code; team collaboration tools and more.

[www.instantiations.com/codepro/analytix/about.html](http://www.instantiations.com/codepro/analytix/about.html)

[sales@instantiations.com](mailto:sales@instantiations.com)

telephone  
training available  
trial available  
address

503.598.4900  
Yes  
Yes  
18101 SW Boones  
Ferry Rd.  
Suite 200  
Portland, OR 97224

## CodePro Profiler™

CODEPRO PROFILER

Instantiations, Inc.

CodePro Profiler is an Eclipse-based software development product that enables Java developers to easily find performance problems early in the development cycle, with flexible subscription-based pricing starting at \$39. • Automatically locate performance bottlenecks, memory leaks, and threading issues • Highly accurate profiling with nearly zero overhead • On-demand profiling with powerful telemetry reporting • Seamlessly integrates into Eclipse development, on desktop or headless • Extensive documentation and optimization guide

[www.instantiations.com/codepro/profiler](http://www.instantiations.com/codepro/profiler)

[sales@instantiations.com](mailto:sales@instantiations.com)

telephone  
training available  
trial available  
address

503.598.4900  
Yes  
Yes  
18101 SW Boones  
Ferry Rd.  
Suite 200  
Portland, OR 97224


**cruise**<sup>®</sup>  
Release Management

## CRUISE

ThoughtWorks Studios

Continuous integration tools fall short when handling the complexities of release management. Lack of a common tool to manage

commit-to-production automated releases lowers visibility, delays critical feedback and causes expensive defects. Cruise gives real-time visibility and control of your build, deploy, test and release process, not only to the build teams, but also to testers, developers and management. With a focus on shortening the feedback cycle, accelerating automation, and collaborating over releases.

[studios.thoughtworks.com/cruise-release-management](http://studios.thoughtworks.com/cruise-release-management)
[studios@thoughtworks.com](mailto:studios@thoughtworks.com)

 telephone  
training available  
trial available  
address

 512.382.5017  
Yes  
Yes  
Market Street  
SpearTower  
35th Floor  
San Francisco, CA  
94105


## DARTENIUM

Datamatics Global Services

DARTENIUM high-productivity automation framework for web testing transforms Selenium into a robust automation framework that offers

complete control over the automation process. Benefits—Hybrid framework: keyword and data-driven—Full support for Web 2.0—Create scripts easily—One-time automation pack guided, optimized through GUI—Robust execution engine: parallel runs across many machines—Complete OS-browser combo support—Inbuilt, configurable recovery scenarios—Result viewer supports faster result analysis.

[www.dartenium.datamatics.com](http://www.dartenium.datamatics.com)
[dartenium\\_salesupport@datamatics.com](mailto:dartenium_salesupport@datamatics.com)

 telephone  
training available  
trial available  
address

 91.22.6102.0918 /  
6102.0013 / 6102.0933  
Yes  
Yes  
Knowledge Centre  
Street No. 17  
MIDC, Andheri (East)  
Mumbai, Maharashtra  
400096 India


## DARTS—DATAMATICS AUTOMATED REGRESSION TESTING SUITE

Datamatics Global Services

A keyword-driven automation framework following a component-based modular structure, facilitates reuse across diverse applications on various technologies.—

It is based on the principle of Functional Decomposition and Keyword Driven Methodology. It has the best practices for automation design.—Functional experts

are enabled to create automation scripts using an excel interface thus reducing cost for Automation resources.—Global flags to run failed scenarios, thus reducing configuration time.

[www.datamatics.com/Services\\_Testing\\_Automation\\_DARTS.htm](http://www.datamatics.com/Services_Testing_Automation_DARTS.htm)
[bijesh\\_kamath@datamatics.com](mailto:bijesh_kamath@datamatics.com)

 telephone  
training available  
trial available  
address

 91.22.6102.0918 /  
6102.0013 / 6102.0933  
Yes  
Yes  
Knowledge Centre  
Street No. 17  
MIDC, Andheri (East)  
Mumbai, Maharashtra  
400096 India
DATA EXPRESS<sup>®</sup>

Borland (a Micro Focus Company)

Data Express automates the management of test data—from the mainframe to distributed environments—to ensure that applications are thoroughly tested with “real” data. The technology

ensures compliance with data privacy regulations by masking sensitive information to avoid misuse or loss. It reduces storage costs by 90% by using subsets of live data for testing. And it slashes turnaround time on development tasks by speeding test data generation up to 80%.

[www.microfocus.com/products/DataExpress/](http://www.microfocus.com/products/DataExpress/)
[dataexpress@microfocus.com](mailto:dataexpress@microfocus.com)

 telephone  
training available  
trial available  
address

 512.340.2200  
Yes  
No  
400 Interstate Parkway  
Suite 1600  
Atlanta, GA 30339


## DEVTEST

TechExcel, Inc.

Using DevTest, QA managers and engineers can create, manage, and

document all test plans in a centralized repository. Users can then schedule and assign these tests to their team using an intuitive wizard driven interface. Once assigned, testers execute these tasks and defects can be automatically submitted to development projects establishing links automatically between the test task and the submitted defects. DevTest tracks your tests in built-in presentation quality reports and unique planning dashboards.

[www.techexcel.com/products/devtest.html](http://www.techexcel.com/products/devtest.html)
[dgaber@techexcel.com](mailto:dgaber@techexcel.com)

 telephone  
training available  
trial available  
address

 800.439.7782 ext. 5  
Yes  
Yes  
3675 Mt. Diablo Blvd.  
Suite 200  
Lafayette, CA 94549





#### DSTAR

Mosaic, Inc.

DSTAR™ is a Quality Center (QC) add-on that tracks and maintains test data assignments for reusable tests in QC using an ODBC-compliant database. DSTAR™ controls and maintains test data extracted from databases or created externally. DSTAR™ allows test data assignments to be maintained as late as test execution time and then provides the data for test execution. DSTAR™ includes an integrated test automation framework and management reporting. It maximizes reusability and maintainability of all your testing assets with or without BPT.

[www.mosaicinc.com](http://www.mosaicinc.com)  
[kjohns@mosaicinc.com](mailto:kjohns@mosaicinc.com)

telephone	312.819.2220
training available	Yes
trial available	No
address	205 N Michigan Ave. Suite 2211 Chicago, IL 60601



#### EXPERT TRAINING PROVIDER

SQE Training

SQE Training provides the widest selection of specialized software training courses available. Find the training you need for your testing, development, management, requirements, and security challenges. Courses can be delivered in a variety of modes; Public, On-site, Live Virtual, and eLearning. Become an ISTQB™ certified software tester and train for either the foundation or advanced level certifications with SQE Training courses. Get the professional development units you need for your PMI Certification by taking courses that have been accredited by the PMI.

[www.sqetraining.com](http://www.sqetraining.com)  
[jmacnaughton@sqe.com](mailto:jmacnaughton@sqe.com)

telephone	904.278.0524 ext. 212
training available	Yes
trial available	Yes
address	330 Corporate Way Suite 300 Orange Park, FL 32073



#### GH TESTER

Green Hat

Organizations realize agility, quality and productivity easily and quickly with Green Hat's quality management tools for the SOA lifecycle. GH Tester makes testing simple. Customers get superior end-to-end coverage with automated functional, regression and performance testing, virtualization and governance compliance for composite applications that rely on SOA, BPM, messaging and legacy technologies. With testing reduced from weeks to minutes and risks identified in advance, customers and service providers innovate with confidence.

[www.greenhat.com/tg2010](http://www.greenhat.com/tg2010)  
[sales@greenhat.com](mailto:sales@greenhat.com)

telephone	302.746.7416
training available	Yes
trial available	Yes
address	650 Naamans Rd. Claymont, DE 19703



#### HATS—HEADSTRONG AUTOMATION TESTING SOLUTION

Headstrong LLP

HATS is an internal tool developed by Headstrong in an effort to accelerate the test execution process. It uses specific attributes and adds developed scripts to its repository. At scheduled times, HATS executes scripts and along

with its monitoring and test management layers, HATS provides a clear path for test execution along with a report identifying scripts that have passed and those with issues. HATS has been used extensively with several of our clients in reducing their regression burden as much as 60% from its initial use.

[www.headstrong.com](http://www.headstrong.com)  
[karnik.minassian@headstrong.com](mailto:karnik.minassian@headstrong.com)

telephone	408.530.5575
training available	Yes
trial available	No
address	220 W 42nd St. New York, NY 10036



#### HP BUSINESS PROCESS TESTING SOFTWARE

HP Software & Solutions

HP Business Process Testing software is a web-based test design solution that bridges the quality chasm between subject matter experts and quality engineers. This role-based system enables subject matter experts to build, data-drive and execute manual and automated tests without any programming knowledge. It reduces the overhead required to test maintenance and combines test automation and documentation into a single effort.

[www.hp.com/go/software](http://www.hp.com/go/software)  
[vw@hp.com](mailto:vw@hp.com)

telephone	408.725.8900
training available	Yes
trial available	No
address	19091 Pruneridge Ave. Cupertino, CA 95014



#### HP CENTER MANAGEMENT FOR PERFORMANCE CENTER SOFTWARE

##### HP Software & Solutions

HP Center Management for Performance Center software enables you to deploy a successful testing Center of Excellence. This out-of-the-box demand, project and resource management solution provides consistency, control and visibility across your testing activities. It enables your IT organization to leverage common solutions, methodologies and templates in a way that greatly improves your performance testing process.

[www.hp.com/go/software](http://www.hp.com/go/software)  
vw@hp.com

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
No  
19091 Pruneridge Ave.  
Cupertino, CA 95014



#### HP DIAGNOSTICS SOFTWARE

##### HP Software & Solutions

HP Diagnostics software helps you improve application availability and performance in pre-production and production environments. You can drill down from the end user into application components and cross platform service calls to

resolve the toughest problems. This includes slow services, methods, SQL, out of memory errors, threading problems and more.

[www.hp.com/go/software](http://www.hp.com/go/software)  
vw@hp.com

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
Yes  
19091 Pruneridge Ave.  
Cupertino, CA 95014



#### HP FUNCTIONAL TESTING SOFTWARE

##### HP Software & Solutions

HP Functional Testing software delivers a complete automated solution for functional, graphical user interface, and regression testing that helps you reduce the risks of application failures. This software enables your entire team to correct

functionality across all environments, data sets and business processes. You can also create sophisticated test suites with minimal training and easily perform regression testing in constantly changing environments.

[www.hp.com/go/software](http://www.hp.com/go/software)  
vw@hp.com

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
Yes  
19091 Pruneridge Ave.  
Cupertino, CA 95014



#### HP LOADRUNNER SOFTWARE

##### HP Software & Solutions

HP LoadRunner software can help you prevent costly performance problems in production by detecting bottlenecks before a new system or upgrade is deployed. This software enables you to measure end-to-end performance,

diagnose application and system bottlenecks and tune for better performance—all from a single point of control. This helps reduce the costs and time required to test and deploy new applications and systems into your production environment.

[www.hp.com/go/software](http://www.hp.com/go/software)  
vw@hp.com

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
Yes  
19091 Pruneridge Ave.  
Cupertino, CA 95014



#### HP SERVICE TEST SOFTWARE

##### HP Software & Solutions

HP Service Test software is a SOA testing solution that simplifies and accelerates the automated functional testing of SOA services. It reduces the time required to test SOA services and helps ensure that these services meet your

business requirements prior to deployment. It enables your organization to simplify your testing processes and minimize the need for scripting by automating capabilities.

[www.hp.com/go/software](http://www.hp.com/go/software)  
vw@hp.com

telephone  
training available  
trial available  
address

408.725.8900  
Yes  
No  
19091 Pruneridge Ave.  
Cupertino, CA 95014



#### IBM® RATIONAL® FUNCTIONAL TESTER

IBM Rational

IBM® Rational® Functional Tester is an advanced, automated functional and regression testing tool for testers and GUI developers who need

superior control for testing Java, VS.NET and Web-based applications. Business Analysts can jumpstart test earlier in the lifecycle with visual storyboarding that uses natural language and rendered screenshots to create, edit, and execute tests.

[www-01.ibm.com/software/awdtools/tester/functional/index.html](http://www-01.ibm.com/software/awdtools/tester/functional/index.html)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504



#### IBM® RATIONAL® PERFORMANCE TESTER

IBM Rational

IBM® Rational® Performance Tester is a load and performance testing solution for teams who need to ensure that their applications scale and

meet end user demands. Performance Tester provides testers with automated performance testing capabilities to validate the scalability of web and server based applications by identifying the presence and cause of system performance bottlenecks.

[www.ibm.com/software/awdtools/tester/performance/](http://www.ibm.com/software/awdtools/tester/performance/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504



#### IBM® RATIONAL® QUALITY MANAGER

IBM Rational

IBM® Rational® Quality Manager is a Jazz-built web-based centralized test management environment for business, system and IT decision makers

and quality professionals who seek a collaborative and customizable solution for test planning, workflow control, tracking and metrics reporting capable of quantifying how project decisions and deliverables impact and align with business objectives.

[www.ibm.com/software/awdtools/rqm/](http://www.ibm.com/software/awdtools/rqm/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504



#### IBM® RATIONAL® REQUIREMENTS COMPOSER

IBM Rational

Rational® Requirements Composer is a Jazz-built requirements solution that enables stakeholders to collaborate in context to define and

manage high-quality requirements using a variety of visual and textual techniques. Rational Requirements Composer integrates with Rational Team Concert and Rational Quality Manager, enabling project teams to shorten planning cycles and reduce rework by aligning development and test effort with requirements and business objectives.

[www.ibm.com/software/awdtools/rrc/](http://www.ibm.com/software/awdtools/rrc/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504



#### IBM® RATIONAL® RHAPSODY®

IBM Rational

IBM Rational Rhapsody is the industry's leading embedded and real time Model Driven Development (MDD) environment for systems,

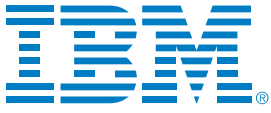
software, and test. Rhapsody enables systems engineers and software developers to achieve unparalleled productivity gains over traditional document driven approaches by enabling the user to specify systems and software design graphically, simulate and automatically validate the system as it is being built to ultimately produce full production code from the model for the embedded systems.

[www-01.ibm.com/software/rational/products/rhapsody/swarchitect/](http://www-01.ibm.com/software/rational/products/rhapsody/swarchitect/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504

**IBM® RATIONAL® SYSTEMS TESTER****IBM Rational**

IBM® Rational® Systems Tester provides systems and integration testing of the software development lifecycle. Rational Tester provides

off-the-shelf automated testing, enabling users to execute tests quickly and repeatedly to maximize quality, while supporting the software test lifecycle—from test design to development, analysis, execution, and debugging—from a single desktop.

[www-01.ibm.com/software/awdtools/ttester/](http://www-01.ibm.com/software/awdtools/ttester/)

[www.ibm.com/rational](http://www.ibm.com/rational)

telephone  
training available  
trial available  
address

914.499.1900  
Yes  
Yes  
1 New Orchard Rd.  
Armonk, NY 10504

**INFOSYS CLEARWARE****Infosys Technologies Limited**

Infosys' Clearware, an end-to-end data warehouse test solution, is platform independent and supports multiple databases. An in-built DWT

strategy, and repository containing business rules and queries, auto-generates test scripts, which reduces dependency on skilled resources and enables participation of business users. It helps in data migration testing. Further, the tool's data query analyzer helps detect anomalies in data quality present in the databases. Infosys' Clearware helps reduce test effort and test cycle time drastically.

[www.infosys.com/testing-services](http://www.infosys.com/testing-services)

[vasudeva\\_naidu@infosys.com](mailto:vasudeva_naidu@infosys.com)

training available  
trial available  
address

Yes  
Yes  
44 Electronics City  
Hosur Road  
Bangalore, Karnataka  
560100 India

**LDRA TESTBED****LDRA Ltd.**

Static analysis and code coverage tool for C, C++, Java, Ada83/Ada95 and Assembler (Intel, Freescale, Texas Instruments). Static

analysis features include code visualisation, programming standards checking and complexity metrics. Code coverage is available for different coverage levels including MC/DC level A for the DO-178B standard, regression testing and available for any host/target environment.

[www.ldra.com/testbed.asp](http://www.ldra.com/testbed.asp)

[jonathan.kelly@ldra.com](mailto:jonathan.kelly@ldra.com)

telephone  
training available  
trial available  
address

44.0.151.649.9300  
Yes  
Yes  
Portside, Monks Ferry  
Wirral, CH41 5LH  
United Kingdom



**SONATA SOFTWARE**

**MANAGED TESTING SERVICES****Sonata Software Limited**

Sonata Software is a global IT consulting and Services Company with a deep focus on software testing. Sonata's independent testing practice provides independent validation and verification services to its global clientele. Sonata follows a three point strategy which includes a consulting led approach, IP enabled solutions and

optimized delivery models to deliver value. Sonata's Testing services include: Test Consulting, Functional Testing, Performance Testing, Test Automation, ERP Testing, Security Testing and Compatibility Testing.

[www.sonata-software.com](http://www.sonata-software.com)

[amit.kumar@sonata-software.com](mailto:amit.kumar@sonata-software.com)

telephone  
training available  
trial available  
address

91.80.26610330  
No  
Yes  
APS Trust Building  
Bangalore, Karnataka  
560019 India

**McCabe IQ****McCabe Software**

The McCabe IQ suite is made up of three multi-platform, multi-language software quality management solutions. McCabe IQ

Developers Edition visualizes the complexity of source code and provides a host of metrics with which to measure quality. McCabe IQ Test Team Edition identifies precisely what areas of code have been tested and facilitates improved test plans. McCabe Enterprise Edition provides all the functionality of the Developers and Test Team Editions, in addition to enterprise reporting and web-enabled test data collection.

[www.mccabe.com/iq.htm](http://www.mccabe.com/iq.htm)

[jpalmisano@mccabe.com](mailto:jpalmisano@mccabe.com)

telephone  
training available  
trial available  
address

401.572.3100  
Yes  
Yes  
41 Sharpe Dr.  
Cranston, RI 02920





#### MSTAR—MOSAIC

Mosaic, Inc.

MSTAR® is the industry's most advanced testing process.

This intranet-ready repository provides complete field-proven guidelines, templates, and samples for a risk-based and measurable testing process. MSTAR® also enables successful test automation with a tool-independent automation architecture proven to reduce maintenance and resource costs while dramatically improving long-term benefits. MSTAR® includes complete guidelines for reusable test planning and test data management. It covers all test levels including performance.

[www.mosaicinc.com/mosaicinc/mstar.asp](http://www.mosaicinc.com/mosaicinc/mstar.asp)

[kjohns@mosaicinc.com](mailto:kjohns@mosaicinc.com)

telephone	312.819.2220
training available	Yes
trial available	No
address	205 N Michigan Ave. Suite 2211 Chicago, IL 60601



#### NEOLOAD

Neotys

NeoLoad is a load testing software designed for Web applications, realistically simulating users and analyzing your servers' behavior. It supports RIAs based on AJAX, Flex, Silverlight, GWT....NeoLoad's exclusive technology allows you to test more quickly, efficiently and frequently so you can deploy your Internet and Intranet applications with total peace of mind. Thanks to its monitoring modules, NeoLoad identifies performance bottlenecks, allowing you to correct them prior to production.

[www.neotys.com](http://www.neotys.com)

[christophe.marton@neotys.com](mailto:christophe.marton@neotys.com)

telephone	33.442.180.830
training available	Yes
trial available	Yes
address	445 Park Avenue Center New York, NY 10022



#### PHANTOM TEST DRIVER

Phantom Automated Solutions, Inc.

The Phantom Test Driver (PTD) is a full featured script development and execution environment for Phantom automation scripts. Key features of PTD include a built-in script editor, a script debugger, multi-script execution capability, remote execution capability, and much more. PTD is the perfect tool for automating application functional testing and regression testing.

[www.phantomtest.com/PTDInfo.htm](http://www.phantomtest.com/PTDInfo.htm)

[sales@phantomtest.com](mailto:sales@phantomtest.com)

telephone	410.212.9318
training available	Yes
trial available	Yes
address	P.O. Box 835 Arnold, MD 21012



#### PROJECT MANAGEMENT TRAINING SERVICES

Catalysis Group, Inc.

Catalysis Group provides on-site project management training for project managers, project team members, and sponsoring executives. Courses range from fundamentals of project management through advanced topics of risk, sponsorship and quality.

[payson@catalysisgroup.com](mailto:payson@catalysisgroup.com)

telephone	916.929.3629
training available	Yes
trial available	Yes
address	374 Santa Ynez Way Sacramento, CA 95816



#### QA WIZARD PRO

Seapine Software

QA Wizard Pro automates the functional and regression testing of Web and Windows applications. Featuring a next-generation scripting language and an easy-to-use Grid View, QA Wizard Pro includes advanced object searching, a global application repository, data-driven testing support, validation check points, and built-in debugging. It also includes batch file support, a real-time status tool, and remote execution support. Focus on what you want to test, instead of how to test it, with Seapine QA Wizard Pro.

[www.seapine.com/qawizard.html](http://www.seapine.com/qawizard.html)

[sales@seapine.com](mailto:sales@seapine.com)

telephone	513.754.1655
training available	Yes
trial available	Yes
address	5412 Courseview Dr. Suite 200 Mason, OH 45040



## Original Software

### QUALIFY

#### Original Software

Qualify is a complete Application Quality Management (AQM) solution that unites all aspects of the Quality lifecycle from requirements through to release. With a communication and collaboration backbone and a full workflow engine that can be modeled to individual business processes and methodologies, Qualify encompasses requirements, planning and scheduling, resource management, test execution, defect management and reporting within one platform.

[www.origsoft.com/products/qualify/solutions@origsoft.com](http://www.origsoft.com/products/qualify/solutions@origsoft.com)

telephone  
training available  
trial available  
address

44.0.1256.338.666  
Yes  
No  
Grove House  
Chineham Court  
Basingstoke, Hants  
RG24 8AG  
United Kingdom



## Ranorex®

### RANOREX GUI TEST AUTOMATION FRAMEWORK

#### Ranorex

Ranorex is a Windows UI test automation framework for testing many different application types including Web 2.0 applications, WPF, Silverlight, Adobe Flash/Flex, .NET and Java. The Ranorex Recorder enables capture/replay of UI tests, edit actions and generates real C#, VB.NET and IronPython code. Ranorex object repositories enable separation of test automation code/recordings from RanorexPath identification information. The IDE includes test project management, intuitive code editor, code completion, debugging, and watch monitor.

[www.ranorex.com](http://www.ranorex.com)  
[info@ranorex.com](mailto:info@ranorex.com)

telephone  
training available  
trial available  
address

43.316.28.13.28  
Yes  
Yes  
Strassgangerstr. 289  
Graz, Steiermark  
8054 Austria



(A MICRO FOCUS COMPANY)

### SILKCENTRAL® TEST MANAGER™

#### Borland (a Micro Focus Company)

SilkCentral Test Manager is the only solution you need to manage all aspects of the application testing process—from establishing testing requirements aligned with end-user needs and specifications to planning, scheduling, and executing tests in physical or virtual test labs to tracking and resolving issues. You can centrally manage all test types – from development stage unit tests to final user acceptance tests and provide role-based access to all application requirements, specifications, test plans, and quality metrics.

[www.microfocus.com/products/SilkCentralTestManager/index.asp](http://www.microfocus.com/products/SilkCentralTestManager/index.asp)  
[testing@microfocus.com](mailto:testing@microfocus.com)

telephone  
training available  
trial available  
address

512.340.2200  
Yes  
Yes  
400 Interstate Parkway  
Suite 1600  
Atlanta, GA 30339



(A MICRO FOCUS COMPANY)

### SILKPERFORMER®

#### Borland (a Micro Focus Company)

SilkPerformer offers a cost-effective, enterprise-class tool for software application performance and load testing, delivering automated software load, stress, and performance testing in an open and sharable model. With SilkPerformer, you can create powerful, realistic load tests for thousands of users running business scenarios across a broad range of enterprise application environments to identify bottlenecks and then apply powerful diagnostics to resolve performance issues.

[www.microfocus.com/products/SilkPerformer/index.asp](http://www.microfocus.com/products/SilkPerformer/index.asp)  
[testing@microfocus.com](mailto:testing@microfocus.com)

telephone  
training available  
trial available  
address

512.340.2200  
Yes  
Yes  
400 Interstate Parkway  
Suite 1600  
Atlanta, GA 30339



(A MICRO FOCUS COMPANY)

### SILKTEST®

#### Borland (a Micro Focus Company)

SilkTest is the proven choice of QA professionals for powerful functional and regression test automation. Its intuitive GUI record-and-play capabilities—coupled with a stable, easy-to-use testing language—enable you to build tests that do not break with minor changes to the application, a problem that makes most functional testing tools too costly to implement. SilkTest delivers time-tested stability and support for major enterprise environments in a cost-effective package.

[www.microfocus.com/products/SilkTest/index.asp](http://www.microfocus.com/products/SilkTest/index.asp)  
[testing@microfocus.com](mailto:testing@microfocus.com)

telephone  
training available  
trial available  
address

512.340.2200  
Yes  
Yes  
400 Interstate Parkway  
Suite 1600  
Atlanta, GA 30339

## SmarteSoft™

Test ▶ Automation ▶▶▶ Made Easy

simulate projected usage patterns and ramp load up as high as necessary, while analyzing performance bottlenecks and optimizing system performance much faster than can be done with other tools. It's easy to use (no scripting skills needed!), powerful, and it comes at a fraction of the price of competing products.

[www.smartesoft.com/products\\_smarteload.php](http://www.smartesoft.com/products_smarteload.php)

[gary.bowers@smartesoft.com](mailto:gary.bowers@smartesoft.com)

### SMARTELOAD

SmarteSoft Inc.

SmarteLoad enables you to verify your system's ability to cope with load under any scenario. With it, you can

telephone  
training available  
trial available  
address

512.782.9406  
Yes  
Yes  
3200 Steck Ave.  
Suite 260  
Austin, TX 78757

## SmarteSoft™

Test ▶ Automation ▶▶▶ Made Easy

releases, test cases, issues, defects, and tasks in one unified environment. By combining QA Management, Project Management, Deployment Management, and Defect Tracking, and by integrating with a wide variety of third party and open source tools, SmarteQM allows you to take control of your project lifecycle and synchronize development and testing.

[www.smartesoft.com/products\\_smarteqm.php](http://www.smartesoft.com/products_smarteqm.php)

[gary.bowers@smartesoft.com](mailto:gary.bowers@smartesoft.com)

### SMARTEQM

SmarteSoft Inc.

SmarteQM is an integrated QA test lifecycle management system that manages projects, requirements,

telephone  
training available  
trial available  
address

512.782.9406  
Yes  
No  
3200 Steck Ave.  
Suite 260  
Austin, TX 78757

## SmarteSoft™

Test ▶ Automation ▶▶▶ Made Easy

with other tools. SmarteScript requires no scripting skills, and is incredibly easy and fast to learn. In the past, software test automation engineers were forced to rely on either the dated and inefficient method of Record and Playback testing, or the time consuming and error prone process of manual scripting. Now, SmarteScript's scriptless approach offers you a simple, fast, and affordable alternative.

[www.smartesoft.com/products\\_smartascript.php](http://www.smartesoft.com/products_smartascript.php)

[gary.bowers@smartesoft.com](mailto:gary.bowers@smartesoft.com)

### SMARTESCRIPT

SmarteSoft Inc.

SmarteScript enables implementation of automated regression test suites four to five times faster than

telephone  
training available  
trial available  
address

512.782.9406  
Yes  
Yes  
3200 Steck Ave.  
Suite 260  
Austin, TX 78757

## SmarteSoft™

Test ▶ Automation ▶▶▶ Made Easy

open API with which you can extend its already substantial capabilities to meet virtually any need. Developers using Studio and QA teams using SmarteScript v6.0 can share scripts and extensions, allowing you to extract maximum value from your teams. SmarteStudio provides strong support for Adobe Flash/Flex, Microsoft .NET, Java (2010), and many other environments.

[gary.bowers@smartesoft.com](mailto:gary.bowers@smartesoft.com)

### SMARTESTUDIO

SmarteSoft Inc.

SmarteStudio is an advanced, GUI-driven, unit-test automation tool and environment which provides an

telephone  
training available  
trial available  
address

512.782.9406  
Yes  
No  
3200 Steck Ave.  
Suite 260  
Austin, TX 78757



QUALITY INTELLIGENCE  
Intelligence about software quality, intelligently applied

### SOFTWARE TEST CONSULTING AND MANAGEMENT

Quality Intelligence Inc.

Test Consulting: I work with managers and teams to

identify the specific business challenges of software implementation in your organization, and determine which of those risks can be addressed by software testing and test management. I recommend practices that will cover your risks, with a practical roadmap and coaching for achievable improvements. If testing is in trouble, I work with your team to get it back on track. Test Management: I manage testing on challenging projects, specializing in large-scale systems integration testing.

[fiona.charles@quality-intelligence.com](mailto:fiona.charles@quality-intelligence.com)

training available  
trial available

Yes  
Yes

**TBREQ**

LDRA Ltd.

TBreq is a unique solution that can help development teams overcome the challenges of mapping test specifications, unit testing scenarios, test data and code coverage verification back to their high level design requirements. TBreq interfaces directly with management tools such as IBM® Telelogic® DOORS®, IBM® Rational® RequisitePro®, Microsoft® Word documents or Excel spreadsheets in order to ensure traceability across the complete software lifecycle thus verifying the completeness of the requirements coverage.

[www.ldra.com/tbreq.asp](http://www.ldra.com/tbreq.asp)
[jonathan.kelly@ldra.com](mailto:jonathan.kelly@ldra.com)

 telephone  
training available  
trial available  
address

 44.0.151.649.9300  
Yes  
Yes  
Portside, Monks Ferry  
Wirral, CH41 5LH  
United Kingdom
**TBRUN**

LDRA Ltd.

TBrun is LDRA's automated unit testing tool. The functionality within TBrun includes a GUI interface which automates the production of test data vectors (by using TBeXtreme) whilst test harness and stub generation is completely automatic. It also produces the test documentation and other reports. Automatic generation of test data vectors can be provided by TBeXtreme for robustness, test scenarios and support of black-box, white-box and object-box testing.

[www.ldra.com/tbrun.asp](http://www.ldra.com/tbrun.asp)
[jonathan.kelly@ldra.com](mailto:jonathan.kelly@ldra.com)

 telephone  
training available  
trial available  
address

 44.0.151.649.9300  
Yes  
Yes  
Portside, Monks Ferry  
Wirral, CH41 5LH  
United Kingdom
**TBVISION**

LDRA Ltd.

TBvision provides transparency into source code, enabling managers, teams and developers to better monitor testing, quality metrics, memory errors and security vulnerabilities. Recognising the increased need for graphical ability to show code quality, fault detection and avoidance measures, TBvision incorporates next-generation reporting capabilities. As a highly flexible solution, TBvision provides users with the ability to quickly and easily view results in call graphs, flow graphs and code review reports for graphical feedback.

[www.ldra.com/tbvision.asp](http://www.ldra.com/tbvision.asp)
[jonathan.kelly@ldra.com](mailto:jonathan.kelly@ldra.com)

 telephone  
training available  
trial available  
address

 44.0.151.649.9300  
Yes  
Yes  
Portside, Monks Ferry  
Wirral, CH41 5LH  
United Kingdom
**Original Software****TESTBENCH**

Original Software

TestBench is available for SQL Server, Oracle and System i. It facilitates the management and manipulation of database and visual layer components and is able to show you what happened in the database as a result of the test process, allowing you to view and interrogate the database effects. Test Data Management functionality enables testers to extract and subset data for test environments, scramble sensitive data and roll-back the database to a previous state if it becomes corrupted.

[www.origsoft.com/products/testbench/](http://www.origsoft.com/products/testbench/)
[solutions@origsoft.com](mailto:solutions@origsoft.com)

 telephone  
training available  
trial available  
address

 44.0.1256.338.666  
Yes  
No  
Grove House  
Chineham Court  
Basingstoke, Hants  
RG24 8AG  
United Kingdom

# TestComplete™

automate your tests

**TESTCOMPLETE**

AutomatedQA

TestComplete is the first test automation tool to support Windows 7. It's an easy to use test automation solution with integrated support for a wide range of both internal and UI testing including functional, unit, regression and load testing. TestComplete supports Windows, Web, VB, .NET, Delphi, Java, Flash, Flex, and Silverlight applications. TestComplete also works with Windows Mobile and Smart Phones.

[www.testcomplete.com](http://www.testcomplete.com)
[sales@automatedqa.com](mailto:sales@automatedqa.com)

 telephone  
training available  
trial available  
address

 978.236.7900  
Yes  
Yes  
100 Cummings Center  
Suite 420B  
Beverly, MA 01915





## Original Software

### TESTDRIVE

#### Original Software

A full-featured automated testing solution designed to test GUI and browser applications "out-of-the-box". TestDrive uniquely solves the twin issues of complexity and maintenance which have historically been a stumbling block with automation solutions. It requires no programming skills, empowering subject matter experts to define and execute sophisticated tests without the need to use any kind of code or scripting. The self-healing technology automatically adapts tests enabling minimum maintenance and maximum reuse.

[www.origsoft.com/products/testdrive/solutions@origsoft.com](http://www.origsoft.com/products/testdrive/solutions@origsoft.com)

telephone	44.0.1256.338.666
training available	Yes
trial available	No
address	Grove House Chineham Court Basingstoke, Hants RG24 8AG United Kingdom



## Original Software

### TESTDRIVE-ASSIST

#### Original Software

A new concept in testing that delivers active support for manual testing and compiles history on recent testing, making it easy to re-create and isolate software defects. TestDrive-Assist tracks every user action within the application under test at both the visual layer and at the database level non-intrusively. Testers can detect and highlight defects quickly which can saved for a full audit trail of test results. Test steps are recorded and can easily be converted into an automated script in TestDrive.

[www.origsoft.com/products/testdrive-assist/solutions@origsoft.com](http://www.origsoft.com/products/testdrive-assist/solutions@origsoft.com)

telephone	44.0.1256.338.666
training available	Yes
trial available	No
address	Grove House Chineham Court Basingstoke, Hants RG24 8AG United Kingdom



*Leading the Evolution™*

### TESTPARTNER

#### Borland (a Micro Focus Company)

TestPartner is an automated testing tool that speeds functional testing of complex applications developed with a range of distributed technologies. It features a visual, storyboard-oriented approach

to capturing business processes that empowers application users to collaborate with quality experts and accomplish more testing in the time available.

[www.microfocus.com/products/TestPartner/index.asp](http://www.microfocus.com/products/TestPartner/index.asp)  
[testing@microfocus.com](mailto:testing@microfocus.com)

telephone	512.340.2200
training available	Yes
trial available	Yes
address	400 Interstate Parkway Suite 1600 Atlanta, GA 30339



### TESTTRACK TCM

#### Seapine Software

TestTrack TCM, a scalable, cross-platform test case planning and tracking solution, manages all facets of the software testing process including test case creation, scheduling, execution, measurement, organization, and reporting. TestTrack TCM integrates with the leading issue management solution, TestTrack Pro, to automate the plan->test->fix cycle. Complete support for managing automated testing processes is also included. Manage the testing workload with Seapine TestTrack TCM.

[www.seapine.com/tttcm.html](http://www.seapine.com/tttcm.html)  
[sales@seapine.com](mailto:sales@seapine.com)

telephone	513.754.1655
training available	Yes
trial available	Yes
address	5412 Courseview Dr. Suite 200 Mason, OH 45040



### TOTALVIEW

#### TotalView Technologies

TotalView is a GUI-based source code debugger and analysis tool that gives you control over processes and thread execution and visibility into program state and variables. It allows you to reproduce and troubleshoot difficult problems in concurrent programs that take advantage of threads, OpenMP, MPI, or computational accelerators. TotalView provides analytical displays of a running program's state for efficient debugging of memory errors and leaks and diagnosis of subtle problems like deadlocks and race conditions.

[www.totalviewtech.com/download/index.html](http://www.totalviewtech.com/download/index.html)  
[contactsales@totalviewtech.com](mailto:contactsales@totalviewtech.com)

telephone	508.652.7700
training available	Yes
trial available	Yes
address	24 Prime Park Way Natick, MA 01760


**twist**<sup>®</sup>

Test Automation

TWIST

ThoughtWorks Studios

Today's business world demands high-quality software that is thoroughly tested and completely aligned to the customer's needs. Twist combines both of these with its novel collaborative

testing platform. Twist sustains business focus by using business intent directly expressed by business users in their domain language as test specifications. Twist integrates quality with its feature-rich IDE that empowers testers to create, maintain and evolve both your automated and manual tests.

[studios.thoughtworks.com/agile-test-automation](http://studios.thoughtworks.com/agile-test-automation)
[studios@thoughtworks.com](mailto:studios@thoughtworks.com)

 telephone  
training available  
trial available  
address

 512.382.5017  
Yes  
Yes  
Market Street  
SpearTower  
35th Floor  
San Francisco, CA  
94105

 Microsoft  
**Visual Studio** 2010  
Ultimate
VISUAL STUDIO<sup>®</sup> 2010 ULTIMATE

Microsoft

An integrated environment of tools and server infrastructure that simplifies the entire application development process. Deliver business results using productive, predictable, customizable processes & increase transparency

and traceability throughout the lifecycle with detailed analytics. Realize increased team productivity by utilizing advanced collaboration features & use integrated testing and debugging tools to find and fix bugs quickly & easily creating high quality solutions while driving down the cost of solution development.

[www.microsoft.com/visualstudio/test](http://www.microsoft.com/visualstudio/test)
[www.microsoft.com/visualstudio/en-us/howtobuy/default.mspix](http://www.microsoft.com/visualstudio/en-us/howtobuy/default.mspix)

 training available  
trial available  
address

 Yes  
Yes  
One Microsoft Way  
Redmond, WA 98052

 Microsoft  
**Visual Studio**  
Load Test Virtual User Pack 2010
VISUAL STUDIO<sup>®</sup> LOAD TEST VIRTUAL USER PACK 2010

Microsoft

Simulate real-world application performance, stress and load conditions and validate that your solutions are ready

for customers and identifying potential issues early in the application lifecycle. Each pack includes 1000 virtual users which can be aggregated when used in conjunction with Visual Studio Test Agents to achieve the most demanding and scale-out loads. The powerful and extensible load testing platform based on standard tools and frameworks enables teams to collaborate more effectively and scale solutions more predictably.

[www.microsoft.com/visualstudio/test](http://www.microsoft.com/visualstudio/test)
[www.microsoft.com/visualstudio/en-us/howtobuy/default.mspix](http://www.microsoft.com/visualstudio/en-us/howtobuy/default.mspix)

 training available  
trial available  
address

 Yes  
Yes  
One Microsoft Way  
Redmond, WA 98052

 Microsoft  
**Visual Studio**  
Team Lab Management 2010
VISUAL STUDIO<sup>®</sup> TEAM LAB MANAGEMENT 2010

Microsoft

A tool which enables teams to rapidly provision virtual lab environments at a known state for test execution and build

automation. Quickly setup and tear-down complex configurations, test in production-like environments and accelerate your build cycles. Eliminate no-repro scenarios with environment snapshots and shorten development cycles with Coded UI tests. Reduce total cost of ownership on virtualized labs and eliminate waste in your application lifecycle.

[www.microsoft.com/visualstudio/test](http://www.microsoft.com/visualstudio/test)
[www.microsoft.com/visualstudio/en-us/howtobuy/default.mspix](http://www.microsoft.com/visualstudio/en-us/howtobuy/default.mspix)

 training available  
trial available  
address

 Yes  
Yes  
One Microsoft Way  
Redmond, WA 98052

 Microsoft  
**Visual Studio**  
Test Elements 2010
VISUAL STUDIO<sup>®</sup> TEST ELEMENTS 2010

Microsoft

A specialized toolset for QA & Test professionals which delivers a brand new experience for test planning and manual test execution. Align test

teams with the application lifecycle, break the silos across your development and testing teams and enable them to collaborate more effectively. Help eliminate waste across the application lifecycle and embrace change through the use of Test Impact Analysis, rich actionable bug filing and Fast Forward for Manual Testing. Create transparency & allow for better decision making through reporting.

[www.microsoft.com/visualstudio/test](http://www.microsoft.com/visualstudio/test)
[www.microsoft.com/visualstudio/en-us/howtobuy/default.mspix](http://www.microsoft.com/visualstudio/en-us/howtobuy/default.mspix)

 training available  
trial available  
address

 Yes  
Yes  
One Microsoft Way  
Redmond, WA 98052

## WindowTester™

WINDOWTESTER

Instantiations, Inc.

WindowTester Pro is a GUI testing tool that

streamlines testing of Java rich client applications using the SWT or Swing UI frameworks, providing tools to automate recording, test generation, code coverage and playback of GUI interactions within an application. Seamlessly integrates with Eclipse, generating 100% JUnit-compatible code for a high quality and consistent user experience. Once you have developed SWT or Swing Java GUI tests, WindowTester Runner provides UI test execution as a separate function, great for larger teams.

[www.instantiations.com/windowtester](http://www.instantiations.com/windowtester)

[sales@instantiations.com](mailto:sales@instantiations.com)

telephone  
training available  
trial available  
address

503.598.4900  
Yes  
Yes  
18101 SW Boones  
Ferry Rd.  
Suite 200  
Portland, OR 97224



StickyMinds.com and *Better Software* magazine are now on **Twitter**.

If you're already on **Twitter**, follow @StickyMinds for regular updates about weekly columns, news, discussion boards, eNewsletters, and more, as well as information about *Better Software* magazine articles and Software Quality Engineering conferences.

[www.twitter.com/StickyMinds](http://www.twitter.com/StickyMinds).

tweet!  
tweet!



# Why does software collapse but bridges don't?

Today, software is your bridge to customers and partners. You can't afford to let it collapse. At Infosys, we have an engineering approach to IT. We build software as if we are building bridges, with the same rigorous approach to process, quality, and testing; from requirement gathering to final deployment. To know more, visit [www.infosys.com/testing-services](http://www.infosys.com/testing-services)

Infosys®

POWERED BY INTELLECT  
DRIVEN BY VALUES

• Consulting • IT Services • BPO • Product Engineering

[www.infosys.com/testing-services](http://www.infosys.com/testing-services)

Infosys® is a registered trademark of Infosys Technologies Ltd. Infosys acknowledges the proprietary right in the trademarks and product names of other companies mentioned in this document. The trademarks are being used without permission and the publication of the trademarks is not authorized by, associated with or sponsored by the owners of the relevant trademarks.