

Issue
27 **THE**
TESTER
March 2009 Issue

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- Survival techniques for your
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- Platform Transformation Testing

Interactive Workshops

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Testing and Selenium
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Please note that any views expressed in this Newsletter are not necessarily those of the BCS.

FROM THE EDITOR

Matt Archer, Editor

Welcome to this jam-packed edition of *The Tester*, including four articles, our new testing events calendar and the upcoming SIGiST conference programme.

Thanks must go to Stephen Allott for arranging an exceptional conference programme for the March conference with speakers from around the world. Expect two exciting keynote presentations from Google and Microsoft, combined with five tracks sessions and four interactive workshops.

Our four must-read articles cover various walks of testing life. *Rhiannon Thomas* shares her experiences of managing and motivating an offshore test team, before *Michael Bolton* demystifies some of the false dilemmas that exist in the testing industry and how we can overcome them by thinking in shades of grey. *Adrian O'Leary* and *Pradeep Govindasamy* then discuss how to reduce test automation maintenance through smart automation, before *Chris Whelan* stresses why we need to improve our personal skills as testers.

If you are inspired by reading these 4 fantastic articles and would like to become a published author in *The Tester* yourself, then please email me at matt.archer@ivarjacobson.com.

Something that I am particularly excited about this quarter is our new testing events calendar. I can remember starting out in testing and not knowing where I could go to socialise with other testers – other than online. That was many years ago, but the same problem still exists. Where do testers go to get an overview of the year's testing events? Yesterday I would have to say I don't know. Today I am pleased to say that this information can be found in *The Tester*!

I am keen to grow the testing events calendar, so if you are planning a testing event for the second half of 2009 then please email me at matt.archer@ivarjacobson.com so that I may include it to the testing events calendar for the June edition of *The Tester*.

I look forward to seeing you all at the conference in March. In the mean-time, happy testing!

Matt Archer

The Tester Editor
BCS Specialist Group in Software Testing
matt.archer@ivarjacobson.com

SIGIST CONFERENCE BOOKING INSTRUCTIONS

**If you would like to pay online,
you can use our new online
booking and payment system.**

www.bcs.org/events/registration

**If you would like to pay by
cheque, you can download a
booking form.**

<http://www.bcs.org/upload/pdf/sigist-2009-booking.pdf>

**If you have a query relating to
making a booking, please contact
Gemma Liddiard, Specialist
Groups' Officer.**

**Tel: (01793) 417656
gemma.liddiard@hq.bcs.org.uk**

WEBSITE LINKS

**BCS SIGiST website:
www.SIGiST.org.uk**

**SIGiST Standards Working Party:
www.testingstandards.co.uk**

**SIGiST UML Testers Forum:
www.umltesters.org**

MANAGING AND MOTIVATING AN OFFSHORE TEAM



A number of organisations are using offshore test teams as a means to having a productive team together with a significant reduction in cost. At first sight, it seems like an ideal solution. However, there are a number of pitfalls, and it is quite easy to get it wrong.

I have had some experience with working with offshore teams, and have always managed to create a great rapport with the team, with excellent results. I have tried to formulate some of the areas that need to be addressed in order to gain a motivated and high performing team. These are my views around what has helped me, and how I have worked successfully. Some areas may differ from team to team, but it's a learning process for us all!

There are some areas that are common regardless as to whether your team is sitting next to you or otherwise. In practice it is sometimes forgotten that the management and motivating factors are the same regardless of who is working for you.

Get to know your team

This is the easy part, as there are minimal differences between getting to know your team whether offshore or onshore.

If you are introduced as a manager with an offshore team already in place, then get to know them! They will want to know about you, your educational background, where you have worked, what the organisation is all about, and why you enjoy the testing function. Give them facts on why you are qualified to inspire them.

That's the first bit over. The second part is more important, and that is to understand their individual personalities, strengths and weaknesses. This will help you to stop thinking of them as "the offshore team" and instead as fully functioning members of the team. It will also help them to get to know you and to perceive you as someone with whom they can discuss important matters, and less as an inaccessible customer. This is essential for any team lead role, regardless of location.

You will probably find that if you try to familiarise with the team as a group event, then you will learn little about each individual. I'd suggest you have informal chats with each of them to start to learn about their likes, dislikes, strengths and weaknesses. This will give you the information

that you will need later on as the team changes (if someone leaves, or there is a change in a team member's role.) It also puts the relationship between you and the team on a more personal level. You may notice that initially the team are reticent or guarded about asking lots of questions and about suggesting alternative ways of doing things. This could be part of the culture and hierarchy of their organisation. However, when they start analysing what they do, and why they do it, you will achieve a much more highly functioning test team.

In my experience, individuals are much more open in an informal one to one chat, than in a group setting. By picking up the phone, or using Instant Chat with someone, you will be able to glean more information as you will have started to engender the trust relationship. This activity would be the same for any team, regardless of location, so this stage should be straightforward.

If your role is to build the team, then you may wish to involve yourself in the recruitment process. If you have engaged with an offshore team as a service, this may be inappropriate, but speak to your offshore management team. My preference would be to understand someone before they join the team. You wouldn't take someone onshore whose CV you haven't read or who you haven't interviewed so why change this process when you are thousands of miles away? In any case, understand what motivates the potential new member of the team, what their abilities are and how they would fit into the team.

Have some thoughts around how the team should be structured, and discuss these with the offshore team managers. The model I find works best is to have an onshore co-ordinator(s), an offshore team lead(s), and your test resources beneath this. Don't forget that if you are working in a culture where the turnover is typically high, and your project is long term, you should be thinking about how to replace the next resource, and when they will be released. A 'shadow' resource, or someone who is able to work in the background, covering holidays and sicknesses and able to move into the team at a moment's notice is a useful means of backup

given the high churn level in some offshore organisations.

Make sure that they have access to everything that they need to do their jobs and let them know that you are there to assist them, and that is your role. Ensure that they do not perceive you the customer, waiting to criticise. Build a trust relationship, give guidance, monitor the output, but allow the team to work independently towards the goals you set them.

Create a good relationship with the lead

Depending on the size of your test team, you probably need a single point of contact: your test lead. Build the trust relationship, then start to share information about your thoughts and ideas as to how to improve the team and what you think they may need to work better. Work together with the lead to improve the team and trust his/her judgement towards fulfilling that objective. Communicate fully, even over communicate with the lead, and let them decide on how much and what information is useful to disseminate to the team. This will help to shape the way the team functions, to your benefit.

Communicate often with this person, and even if there is no reason to call, just call to have a chat about what is going on. This way it avoids the need to micromanage each member of the team, which in a large team is impossible! They will also ensure that team performance is what it should be for each of the resources, and the methods that they are using are accurate.

Communication, communication, communication

Define what meetings you are going to have with your offshore team, and stick to this. Explain what level of communication you are comfortable with. Can they call you? (Yes) Can they instant message you? (Yes) Can they email you? (Yes). Depending on their culture they may feel that they are unable to speak to the 'customer', so make yourself available to them.

Have face to face meetings if possible at the start of the relationship. Share photos, wish them happy festivals and perhaps even deliver cakes to their office! One of the very effective ways to motivate and build a strong working rapport with the team is to show that you are interested in them. Show concern if they have been ill and share information about yourself if you are happy doing this.

Make use of as much technology as you can to facilitate communication: instant messaging, video conference meetings, conference calls, emails, intranets, common storage areas for

documentation. If you can, visit. In an instant it provides you with information about the culture that would take you a significant time to assimilate through other means. You may find that there is a preferred communication medium. Try to build a rapport through this medium, share information about yourself.

If you do use video or telephone conferences, ensure that the whole team is able to contribute. Ask direct questions to ensure that they understand what you are saying, but ask in a manner which enables them to speak without feeling that they risk criticism from you or their colleagues.

Avoid using your full range of vocabulary, i.e. keep it simple, else you may not get quite what you asked for! Some offshore resources who are new to working with onshore resources may have difficulty in understanding your accent. Try to speak clearly and a little slower than you would normally as they familiarise with your voice. Make sure that they understand what you are saying, through asking questions related to the topic of discussion.

Transparency in communication is important. Most of an onshore / offshore project's success lies in effective communication. How effectively the communication is done defines the maturity of the engagement. Make sure that any information that you have is communicated to the offshore team on time. Any delays will result in mismanagement, confusion and of course the higher cost as the time difference between onshore and offshore is generally lost if the team offshore don't know what the plan is for them.

Be aware that test terminology isn't the same throughout the world. Ensure that you understand what they are saying, and in turn, check that they have understood what you have said. Ask questions to verify that they appreciate what you are telling them. Also elicit ideas as to how you could improve the way of working, or how you could help them further.

Process

Often onshore and offshore organisations are miles apart in terms of process. Working with a CMMi Level 5 company can be quite challenging, as there is likely to be a gap between what happens in the UK or US, and what happens in India (India being the most popular country (92%) for outsourcing).

Normally each offshore organisation has its own process. It is important to understand the process they follow. Decide which processes are required and which are not as part of your project. Even the CMMi Level 5 organisations have some basic requirements, and on some processes a tailoring is required, as long as it not

entirely against CMMi Level 5 standards. As far as you can, understand their processes, so that you can appreciate what problems they are facing. Sometimes a sympathetic ear is all that is required. This should also help you to understand what they do in their time and why logging a defect isn't a two minute process. However, if they are spending 50% of their time understanding why defects were rejected and you can't fathom why they keep asking to change the status from rejected to closed, then ask what metrics they are collating. You may find that the number of rejected defects is a black mark against each of your testers, and will impede their promotion within that organisation.

There are little areas that at first are a little frustrating, or confusing: for example, they will try never to be ahead of schedule or behind schedule as this means that the estimates would have been incorrect. The reasoning behind this, you may find, is that they collate metrics on actual versus estimates. If the variance is high (either plus or minus) then the estimates were incorrect. If they actually complete work ahead of schedule, they will spend the extra time reviewing the work, and perhaps doing some random testing. If, though, you don't know that they have finished, then how do you know that they are doing the most productive piece of work for your needs?

Devise a common process to which you are all comfortable. If working with a programme of test work, you should evolve a common process which can be adhered to. Failure to do this can mean that the offshore resources are frustrated as they have to follow all processes required by 'the customer' and all processes required by their organisation. If this is the case, then resources have to work longer hours to achieve both sets of processes.

Most importantly, ask for their opinions! You may be surprised at how good the suggestions you get are, and it is truly motivating for them to sense that they are recognised, listened to and appreciated, and that they can actually make a difference!

Be one team, functioning as one unit. Work as a liaison between stakeholders and the team: take their queries regarding the application or documentation and get them resolved.

Enable their understanding of the business side of the project

If the test team understand the reason why they are doing the work, then this enables them to test better. Tell them about the business benefits of what they are doing: their understanding of their own input also acts as a motivating factor.

Typically, the information gained by an onshore resource through simply listening to what is going on, and attending meetings, may not be quite so easy with an offshore team. You should introduce your team to the business side and the typical users of the system and what it will be used for. Failure to do this will mean that they script solely from the requirements, then execute these scripts blindly. You will lose the important functions of exploratory testing and error guessing using this method, and you may have a number of queries raised during testing. How many defects will that leave in the system? How much time will also be spent in raising unnecessary defects?

Make sure that your team understand the big picture. They may only be working on a small module, but it is very important for them to get the feeling that they are not working on isolated unit, but towards the business goals which have been set out at the start of the project. To gain more efficient analysis of the requirements, and better exploratory testing, then the business knowledge is imperative.

When a project goes live, the test team will be proud that they helped with the implementation of a project. This will be enhanced significantly if they really understand the end result and how it is going to improve the organisation.

Appreciate them and their good work

Learn about their culture, and certainly take account of their holidays so that you can factor these in well in advance. These can be quite complex. If you are working with Indian resources, then be aware that these vary by State. So, if you have a team in New Delhi, a team in Hyderabad, and a team in the UK, then you have three holiday calendars to worry about.

Think about when you actually need them to work. When a high attrition rate was reported in Wipro in 2007, "odd working hours" was quoted as one of the top reasons why employees left the company. Listen to what your team are telling you (behind the positive responses they may give you when you don't yet have a rapport).

As you would with any team member whether sitting next to you or offshore, chat to the individuals and get to know them. Show interest in what they are doing. Interact with as many as you can and build up your rapport with them. If they have done well, praise them, and if appropriate put the information somewhere visible, like on your intranet, or as an email to the team.

If you feel that someone has really done a great job, send an appreciative email and copy in their manager, and ideally also their manager's manager. For example if the resource who has

done a good job is a test engineer, send the email to his/her team lead and the project manager or senior project manager offshore.

If there is some difficulty in selecting an individual for appreciation but you still feel that the team has done a great job, acknowledge the whole team. Sometimes there is just one person who is fronting the relationship with the customer (i.e. you) for a particular reason (good communication, more experience etc.), but that does not mean that he/she is the only one who is doing the job. Team appreciation should be your preferred form of appreciation unless an individual has far outshined the others.

If there is an issue with a piece of work, then discuss it with the lead. You may need to do this more frequently with an offshore team as the communication is more difficult and you may find that they aren't progressing in the direction you would have liked. There may be a valid reason for the issue which you should undertake to resolve, rather than criticising the individual / team for underperformance. If you are experiencing issues, do share the information with the offshore lead or co-ordinator who will be able to resolve any issues with the individuals and give you the information that you require.

Onshore Secondments

Think carefully about where you need your resources. You may find it very useful to have an onshore co-ordinator who will work the same hours as you and be able to communicate more effectively than you with the offshore team.

Additionally, you may wish to increase onshore resource levels. Think carefully before you do though. Don't bring the team onshore for the sole reason that the Project Manager hasn't worked with an offshore test team before. Consider what is necessary and cost beneficial.

If after doing the sums, if it is beneficial for an offshore resource to come onshore, you will probably be inundated with volunteers! Understand though, that once a resource has come onshore, it makes them more marketable, so you should have controls in place to ensure that when their plane home touches down, they are not immediately seeking a better paid job.

Some organisations working with offshore resources prefer the team to remain constant. However, when working with offshore be aware that after a certain amount of time (12-18 months) the resources are likely to want to progress their career. Plan your rotations out of the team, and ensure that you have resources trained up ready to move into your project. The resources are less likely to feel trapped in your project, and you are less likely to face sudden resignations.

Reducing your team

In today's climate, as project budgets are reduced, you may find that you need to reduce your numbers of offshore testers. This is not an easy area. Plan very carefully around how many resources you require and over what period. Give as much notice as possible to your offshore co-ordinator so that they can start to plan alternative roles for the team. Find out in advance what the notice periods and the terms are around reducing resources.

Take guidance from your offshore leads as to when and how to discuss the reduction in team size. The offshore lead should be responsible for discussing the team member's position with them at the appropriate time. They will have a better understanding around factors such as market conditions, other opportunities, the likely motivation levels of resources if they are given notice and so on. If you are releasing resources who you feel have performed excellently, then send them an email to let them know that their efforts have been appreciated and that it was due to, for example, market conditions that dictated the reduction of resources on the project.

Finally

You will probably find, that that when working with offshore teams, 90% of your issues will be people related, and 10% will be technology related. Put in the effort up front with your team to save yourself a lot of hard work later down the line.

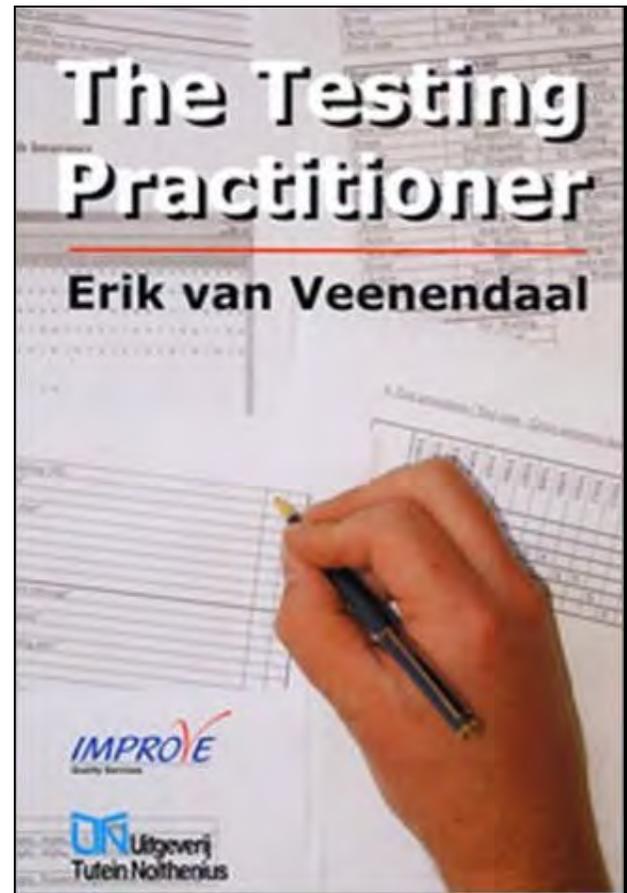
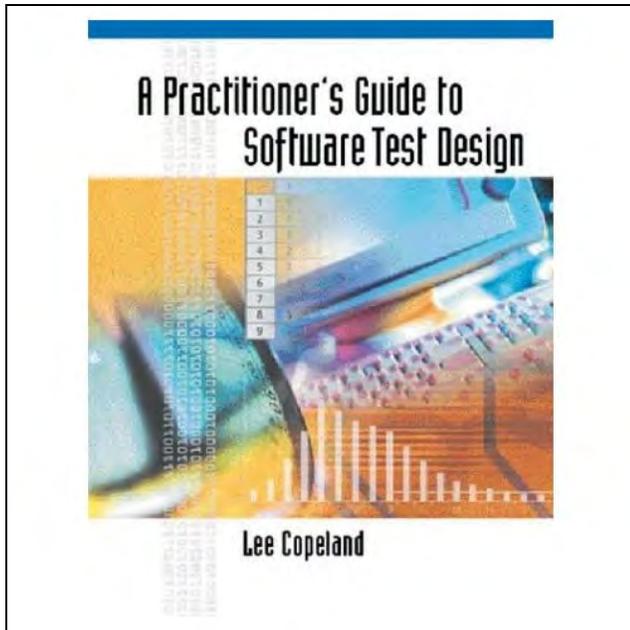
As you can see, there are a number of similarities between offshore and onshore management and motivation techniques. The key is not to see the distance as an inhibitor to performing your role properly. So, know your team members, share your goals for the project, and even your personal objectives, ask for input from your team and ensure that you are a single team, operating as one.

Enjoy working with your offshore team. They will offer you a whole new perspective, via a different culture, on work practices and test methodology. It's eye opening and when you get it right, an absolute pleasure and a delight. Good luck!

Rhiannon Thomas has over ten years in testing, has ISEB Practitioner certification, a BSc in Psychology and a number of years managing offshore resources. She is currently a Global Test Manager for a large financial organisation, with testers onshore and in India.

TEST EDUCATION FOR FREE

Our SIGiST librarian, Sue Atkins, has kindly agreed to bring a selection of books from the SIGiST library to the March conference. For anyone attending, this presents an excellent opportunity to browse a range of testing books and identify any gaps in your testing knowledge. If you see something you like, you can take it away and read it in your own time – free of charge. The books will be displayed outside of the main hall.



SIGIST LIBRARY

Looking for a testing book but not sure which topics are covered? Or are you trying to decide which testing book to buy? Or do you simply want to increase your testing knowledge? If the answer to any of these questions is 'yes' then the SIGiST Library could help!

The SIGiST Library has lots of testing books covering a variety of topics and they are available to borrow for a period of 4 weeks - free of charge. Extended loans are allowed as long as the book has not been requested by another SIGiST member.

Topics include (amongst others) Requirements testing, Reviews/Inspections, Test Management, Test Techniques and Test Process Improvement.

If you would like to know more about the library and books available, or for any queries, please contact Sue Atkins on 01697 748 748 or email her at siglib@iotest.com. Happy Reading!

FALSE DILEMMAS AND SHADES OF GRAY

When I first started to learn to code in Perl and lurking in the online forums, I came across a peculiar abbreviation: TMTOWTDI. Uncle Google is my friend, so I looked it up. TMTOWTDI stands for "There's More Than One Way To Do It". Larry Wall, the original developer of Perl, made this a slogan for the language. He believed that the language should provide alternative ways of expressing the same idea, and that it should not impose problem-solving approaches on the programmer. It's a controversial philosophy, because for every person who believes that there's more than one way to do it, there's another who believes that there's only one way to do it. They can't both be right—or can they?

Marshall McLuhan once said, "We shape our tools; thereafter our tools shape us." In software development, our principal tools—computers, and programs that run on them—give us answers in the form of one or zero, true or false, yes or no, pass or fail. Tools are examples of media. As McLuhan defined them, a medium is any human creation that causes a change, and each medium has four kinds of effects. Every medium extends or enhances or accelerates or intensifies some human capability; every medium retrieves ideas about some previously obsolescent medium; every medium obsolesces some previously existing medium; and every medium, when extended beyond its original or intended capacity, reverses into the opposite of its original or intended effect. The binary computer extends and accelerates our ability to probe software and to make decisions. By extending those powers, computers help to make ambiguity, uncertainty, and intractable problems obsolete. This retrieves ideas from mythology about the Oracle of Delphi, about god-like powers to see the invisible and predict the future—and yet having to interpret the cryptic messages from the Oracle. And, as is the case for every medium, our tools reverse into the opposite of their intended effect when we stretch their capabilities beyond their original limits. It's not hard to see how our experience with binary computers could influence us into thinking in terms of diametrically opposing principles—good or bad, or right or wrong. Let's look at some polarized ideas and see if we can find value between them.

Automated tests vs. manual tests

This division is problematic for a number of reasons. First, it appears that for many people, an "automated test" refers only to the execution of a test while ignoring other, more important aspects: posing an important question, modeling the test space, choosing oracles, determining coverage, observing the outcome, interpreting the results, and determining their significance. Each of these activities depends on human values; each can only be done by a human; and none can be done by a machine. Second, it confuses an activity (testing; questioning a product in order to evaluate it, as James Bach and I define it) with the tool (a means by which we extend or accelerate our ability perform the activity).

By posing a false dilemma between automated and manual tests, we beg two crucial questions. One question is "How might tools extend or enhance or accelerate or intensify our ability to perform a test?" Many forms of testing, like high-volume load or stress tests, would be infeasible or impossible without automation assistance, not only to run the test but also to generate data, to probe the state of the system during and after the test, and to help with logging and analyzing aspects of the outcome. Computers are far better at generating random inputs than humans are, affording a defocused approach when it might be important to use one. Another other, more important question is "*What is it that we want to know about this product?*" When we make that question paramount, we can ask whether—and how—it might be appropriate for automation to assist us. So instead of thinking in terms of "manual tests" or "automated tests", try dropping the false distinction and thinking of test automation as *any use of tools to support testing*.

Pass vs. Fail

One of the traditional hallmarks of a good test is that it should be falsifiable, generating a yes-or-no, pass-or-fail answer. Since it's a human construct, McLuhan would identify the falsifiable test as a medium too. Tools help us to develop, organize, and execute falsifiable questions such that it's relatively easy to create dozens, hundreds, or thousands of tests, each of which asks and answers some question about the program, and each of which is easy to evaluate. This extends the reach of the questions we can ask, but it also produces reversal effects. In developing and running thousands of tests, we reduce our capacity to interpret the results of a particular test. It's also considerably more difficult to assess and evaluate whether a given test *matters*—how the binary answer "pass" or "fail" affects our perception of value. So

instead of thinking pass vs. fail, try thinking in terms of asking “*Is there a problem here?*”

Exploratory vs. Scripted

Over the last few years, the testing community has begun to develop an increasing understanding and appreciation of the fact that any test worth doing has an exploratory dimension. Cem Kaner defines exploratory testing as “a style of testing that emphasizes the personal freedom and responsibility of the individual testers to continually optimize the quality of her work by treating test design, test execution, test result interpretation, and learning as mutually supporting activities that continue in parallel throughout the project.” Excellent testing depends on the cognitive engagement of the tester to produce new information about the system. Testers discover problems that might threaten the value of the product, but they also investigate failure modes, recognize new ways of using the product, identify workarounds to existing problems, and note features and attributes of competitive products. None of these activities can be specified in detail in advance; they require an exploratory approach.

Yet every test done on behalf of a client has a prescribed element too, if only in the mission or motivation for the test. Exploratory testing sessions are chartered; the tester is given a mission which may be quite general or highly specific. Exploratory approaches are not incompatible with planning or specific goals, but the more preconceived ideas—from someone else, at some time in the past—dominate the thinking and actions of the tester, the more we’re in a scripted mode and the less we’re in an exploratory one. Note the difference between a *specified* mission and an *excessively specified* mission. Skilled testers have come to recognize that *excessive* specification comes at a high opportunity cost; it tends to be expensive to produce, and tends to drive testers towards inattentive blindness—the tendency to miss something because of excessive focus on something else. The goal is to guide the testing mission and to foster discovery. So instead of thinking in terms of entirely scripted vs. completely freestyle exploratory testing, try thinking in terms of *guiding a tester with concise communication, including clear mission statements, specific test conditions, or checklists as needed.*

Exploratory vs. Documented

Some argue that exploratory testing is unreliable because it can’t be documented or reproduced. Sloppy testing of *any* kind can be under-documented, and one hallmark of bad testing is wasteful documentation. Exploratory processes

can certainly be recorded and documented well. Throughout history, scientists, scholars, journalists and, yes, *explorers* have engaged in processes of discovery and investigation, and all along they’ve recorded observations, sketched diagrams, logged results, drawn maps, created tables, rendered illustrations, jotted down notes, or composed narratives of their work in rich and descriptive detail. With these documents to guide them, the explorers themselves or others could follow the path to understand or reproduce the important elements of the experience. Choices about the format and the extent of these documents were driven by the context of the exploration. Sometimes the explorers were working on their own or with close colleagues, so notebooks and letters formed the principal records. Sometimes the explorers worked for a specific client or for a wider audience, in which case the document was prepared in an elevated format for presentation. As a record of an exploratory process, test documentation can and should just as diverse. The testing mission, the client, the nature of what is being explored, relevant documentation standards, previously existing documents, practice, skill, value and all inform the quality of test documentation. Instead of thinking of exploratory testing as unreliable or undocumented, try thinking in terms of *recognizing appropriate recording and reporting as components of excellent exploratory processes.*

Thinking in terms of strict logic, yes-or-no decisions, and mutually exclusive alternatives can limit the power of our models and our imaginations, making information more ambiguous and decisions more difficult. Binary models of the world can lead us astray, tempting us to ignore nuances, to think in terms of polar opposites, and to divide people into opposing camps. If we look at our models multi-dimensionally, we see more than black and white, or even shades of gray. We see a richly colorful world, diversified communities that reflect a variety of values, and many means of helping our clients to achieve their goals. There’s always more than one way to do it.

Michael Bolton teaches testers, programmers, and managers in Rapid Software Testing, a course and a methodology (developed with senior author James Bach) for performing excellent, accountable testing under conditions of uncertainty and extreme time pressure. He lives in Toronto, Canada. He’s happy to take your questions or comments; please feel free to contact him at mb@developsense.com.

PROGRAMME COMMENTARY: SURVIVING THE TESTING SQUEEZE

Stephen K. Allott, Programme Secretary

Surprisingly in these difficult times, I've been too busy to write a long editorial comment on the programme this month so here's the lean, concise, agile, good enough (delete as appropriate) version.

The theme I have chosen for the March conference is all about survival during an economic downturn and it also has a secondary interpretation familiar to all testers: there's never enough time to test everything. With increasing pressure on development and test teams to deliver more high quality defect free software with fewer resources in less time it's not surprising that some are turning increasingly to Agile methods; hence the focus on some of the talks and workshops on this important topic.

The **talks** in the main auditorium will be too good to miss:

- James Whittaker – Microsoft – **keynote speech** "a call to arms to help define the future"
- Sam Clarke – Agile cracked unit testing but what about the rest? ; Sam explains the challenges of testing in an Agile project
- Pradeep Chennavajhula - Edista Testing Institute – eliminating waste in the testing cycle
- Julian Harty – Google – practical, experienced based automated test techniques
- Dave Pavey – HBOS case study – migration of 1000 programs from a legacy system

The **workshops** run alongside some of the main talks and are designed for your participation so will be limited to around 20 – 25 people. The Testoff from Stewart Noakes of TCL is back by popular demand, please sign up early if you wish to take part. John Watkins will present his research findings on Agile – one year on. James Whittaker helps guide testers to use exploratory techniques based on experiences at Microsoft. Komal Joshi and Anand Ramdeo show an approach to automation within an agile team using opensource tools.

The new and upcoming speaker this month taking advantage of our Share Point slot is

freelance test manager Lucinda Casey with an introduction to tactical test management.

Please book early, especially if you want to attend a workshop and please note the workshops run alongside the main talks so you cannot attend both – why not bring along a colleague or two, attend all the sessions as a team and swap notes back in the workplace?

I'm always on the lookout for new speakers so please download our 2009 call for papers from the website and follow the instructions to submit your ideas for a talk or a workshop.

Enjoy our March conference – surviving the testing squeeze.

Stephen K. Allott

Programme Secretary
BCS Specialist Group in Software Testing
stephen.allott@electromind.com

**PLEASE DON'T DELAY,
BOOK TODAY**

**These one day events are
becoming ever more popular.**

**Attendance is up considerably on
last year with 189 participating in
the June conference.**

**Please don't delay, book now to
secure your place and avoid
disappointment.**

**The workshops sell out quickly
and numbers are strictly limited
to 12 or 25 participants
depending on your choice.**

**Please note (because people ask
every time) that the workshops
run alongside some of the talks
and so you cannot do both.**

MARCH 2009 CONFERENCE PROGRAMME

BCS SIGiST – Surviving the Testing Squeeze Tuesday 17th March 2009 Royal College of Obstetricians and Gynaecologists 27 Sussex Place, Regent's Park, London NW1			
08:30	Coffee & Registration, Tools & Services Exhibition opens		
09:15	Introduction and Welcome Stuart Reid, SIGiST Chairman		
	Opening Keynote		
09:30	An Update on the Future James Whittaker, Microsoft, USA		
10:30	Networking session and commercial break		
10:45	Tea/coffee break Opportunity to visit the Tools & Services Exhibition Browse a selection of testing books from the SIGiST Library		
11:15	Agile cracked unit testing but what about the rest? Sam Clarke nFocus	Workshop M1 How to Apply Real World Agile Practices to Your Own Testing Projects John Watkins IBM	Workshop M2 The Touring Tests James Whittaker Microsoft
12:00	Lean and Clean for Leadership in Testing Pradeep Chennavajhula Edista Testing Institute		
12:45	Tea/coffee break Opportunity to visit the Tools & Services Exhibition Browse a selection of testing books from the SIGiST Library		
14:00	Survival techniques for your acceptance tests of web applications Julian Harty Google	Workshop A1 "Agility" in testing: Agile Testing and Selenium Komal Joshi Atlantis Software and Anand Ramdeo GCap Media	Workshop A2 The Testoff Stewart Noakes TCL
14:45	Platform Transformation Testing – A case study from HBOS Dave Pavey Freelance Test Manager		
15:15	Tea/coffee break Opportunity to visit the Tools & Services Exhibition Browse a selection of testing books from the SIGiST Library		
15:45	The Share Point, Lucinda Casey, Waterbank IT Tactical test management – work with me		
	Closing Keynote		
16:00	Surprise Ending James Whittaker (Microsoft) and Julian Harty (Google)		
17:00	Closing Remarks		

The SIGiST committee reserves the right to amend the programme if circumstances deem it necessary. Workshops will have limited places, to avoid disappointment try to book in advance.

Opening Keynote: An Update on the Future

James Whittaker, Microsoft, USA

In 2008 James gave a lecture series on the Future of Testing and in this talk he gives an update on that future and what is being done to implement it at Microsoft. James will preview next generation testing ideas and tools and talk about the technical hurdles that must be cleared by the entire test community. The talk is more than a vision of the future of our field but a call to arms for testers to actively participate in making that future happen.

James A. Whittaker, now a Software Architect at Microsoft, has spent his career in software testing. He was an early thought leader in model-based testing where his PhD dissertation from the University of Tennessee became a standard reference on the subject. While a professor at Florida Tech, he founded the world's largest academic software testing research center and helped make testing a degree track for undergraduates. Before he left Florida Tech, his research group had grown to over 60 students and faculty and had secured over \$12 million in research awards and contracts. During his tenure at FIT he wrote How to Break Software and the series follow-ups How to Break Software Security (with Hugh Thompson) and How to Break Web Software (with Mike Andrews). His research team also developed the highly acclaimed runtime fault injection tool Holodeck and marketed it through their startup Security Innovation, Inc.

Dr. Whittaker currently works at Microsoft as an architect for Visual Studio Team System where he is busy transforming his testing ideas into tools and techniques for developers and testers. He dreams of a future in which software just works.

Agile cracked unit testing but what about the rest?

Sam Clarke, nFocus

Sam will draw on experience gained whilst developing and implementing automated testing for the Government Gateway (a large complex authentication and routing system) to demonstrate how the approach could be applied to the perceived testing challenges of the Agile methodology. The challenges faced by the test team had many similarities with Agile projects. These included:

- Provide continuous and robust testing on each build of the system
- Perform regression testing to ensure changes were fully backwards compatible
- Ensure user applications were not compromised by changes

The solution was to incrementally construct an automated set of tests. The approach, which is more resilient to change than traditional automation, involved the abstraction of the test definitions away from the underlying automation toolset. Close collaboration with the developers reinforced the culture of 'don't break the build' whilst supplying key information to the managers.

This approach and the use of test automation tools is well placed to help solve the challenges of continuous functional and acceptance testing in an Agile continuous build environment.

Sam Clarke has 40 years experience in IT. He specialises in IT related testing and has a proven record of defining, implementing and managing testing strategies for proprietary software development, banking, insurance, utilities, manufacturing, retail, and telecommunications. He uses his consulting experience to review and report on an organisation's testing processes giving options for improvement where necessary. Sam is skilled in facilitation of workshops covering project definition, project risks, test strategy, problem solving and quality improvement. Now a Principal Consultant at nFocus, his background includes consultancy and test management at IBM Global Services and IBM Product Development. He's a popular and well known speaker having presented at several UK, European and international testing and quality conferences.

Lean and Clean for Leadership in Testing

Pradeep Chennavajhula, Edista Testing Institute

In the current scenario, everything that does not add value to customers is considered waste. The focus and emphasis on waste has never been so serious, thanks to the cost cutting initiatives taken up by many organizations across the world. While many organizations understand the truth, they face difficulty with identifying waste, and non-value adding activities. Once identified, it takes a long time for the organization to align the teams to ensure the waste is reduced to a minimum.

In the context of Software Testing, this problem becomes more imminent for improvement for

enabling testing in an efficient and effective manner. Extending the definition of wastage, it would imply that any extra processes and features not often used by customers are waste; waiting for other activities, teams, processes is waste; Defects and lower quality are waste; and managerial overhead not producing real value is waste. In the presentation, PC will focus on highlighting the common wastes in the testing process, common justifications provided by organizations and team members for reducing wastage. Given the common rationalization, the presentation provides an experiential views on how an organization can eliminate the wastes in the testing life cycle. The same is based on our experience with the improvement journeys undertaken at some of the world's leading organizations in Software.

Pradeep Chennavajhula is CEO of the Edista Testing Institute, an independent venture of QAI Global Services focused on Software Testing. His current focus is to enable IT organizations with Workforce Development in Software Testing. Well known on the IT Conference circuit in India, particularly those focusing on Software Testing, PC's main interests include Testing, Estimation, Project Management, Economics, and Strategy. His clients include the likes of Oracle, Microsoft, Accenture, Unisys, Deloitte, Logica, and many others.

Survival techniques for your acceptance tests of web applications

Julian Harty, Google

Web applications are prevalent and are changing people's expectations of cost, ubiquity, and how they use computers e.g. with social networking, email and even major business software available online today. Good tests should be cost effective, and outlive your active involvement on a project (which may be sooner than you think in the current downturn). Automated acceptance tests can help increase the velocity of the project team, by providing trustworthy safety rails while reducing the overall cost of testing over the life of a project. Programming teams come and go, testers are reassigned, and ultimately only essential tests will survive.

Come to learn some practical automated testing techniques that increase the utility and life of the automated tests. We'll cover inexpensive, proven, open testing tools; effective test designs; and experience reports from current projects at Google.

For those with a technical bent, we'll cover: PageObjects, WebDriver, Continuous Builds,

JUnit and brightly coloured Orbs. Technology include mobile browsers and AJAX.

Julian is a senior test engineer at Google, working on a range of mobile and web-based software applications. He's passionate about making software work for all the users. Over the years he's written articles, and presented keynotes, tutorials and is actively involved in various software testing communities.

Platform Transformation Testing – A case study

Dave Pavey

Every big organisation has them - Legacy systems running on old hardware written in programming languages that very few people now know. One-way to address this to install new hardware and use a code conversion process such as Asysco's AMT-VS. HBOS has recently completed a highly successful project to do just that. Dave Pavey was the Test Manager on this project.

Patrick McNaught (Project Sponsor) says: "I was delighted to find that despite having migrated 47 systems and over 1,000 programs, 9,000 objects and 500 Visual Basic scripts, there were only 18 minor post-implementation issues." He was also pleased with the stability of the system, despite it having to handle in excess of five million transactions per day. "The new AMT-VS system has been as stable as the mainframe system on Unisys and has provided significant performance benefits,"

Traditional functional testing techniques to test the newly converted systems were rejected as this would have created a massive test project and been very expensive. To make life more complicated, legacy systems tend to have limited system documentation and have few systems experts.

In Dave's talk, he will be walking through the test approach he adopted, outline some of the issues encountered and discuss some lessons that can be learnt.

Dave Pavey is a freelance Test Manager and for the last 6 years he has worked on large complex Test Projects at HBOS and RBS/Lombard. Prior to this, Dave was the Founder and Managing Director of DLP Consulting providing IT support, development and testing services to SMEs. Dave led the company to be Gloucestershire Small Business of the Year in 1999 and achieve Investors in People accreditation in 2001. Dave started his career as a Cobol and PL/1 programmer. Dave has studied with Open University

Workshop M1: How to Apply Real World Agile Practices to Your Own Testing Projects

John Watkins, IBM

Agile development is a 30 year old over-night success; in fact, most of the young practitioners who so enthusiastically promote this new way of developing and testing software, had almost certainly not even been born when James Martin first began to develop RAD (the Rapid Application Development method)! Agile is frequently promoted as the new silver bullet to all software development and testing problems; pretty much any software event you go at the moment, any user group or standards group you attend, or much of the IT literature is full of agile references.

This is not to say that agile doesn't have its detractors; many traditional IT practitioners will tell you agile only works for small, simple and well bounded software projects, where the customer and project team are co-located, and where the team is staffed by experienced and capable practitioners. Why wouldn't a project succeed under such circumstances? So what happens if the customer or some of the team are off-site (or even off-shore)? What happens if the application is large, complex, and carries significant technological risk? What if you can't afford to staff your development project with highly experienced, capable, motivated and very expensive agile experts? I.e. what happens in real world projects?

In order to answer this question, I undertook a survey of more than 20 real world agile testing projects. Analysing the results of this survey, I have been able to identify a number of common agile themes and trends. In particular, I identified those agile practices that had been used successfully, those practices that might need to be used with caution, and those practices whose use might need to be carefully challenged.

This workshop will review the results of the survey of real world agile testing projects, discuss the highlights of the analysis of the project data and its results, highlight those agile practices that have been shown to be beneficial in testing, those that may need to be used with caution, and those whose use should be challenged. Attendees are encouraged to bring details of their own testing projects, and a

number of examples will be selected as case studies to discuss how to put together a set of effective and efficient agile practices to match the specific requirements of the selected projects.

Attendees will be provided with useful collateral to assist them review and analyse the characteristics of their own testing projects, and a useful matrix showing what agile practices are appropriate to a variety of testing projects of varying size, complexity and organisation.

Attendees will also be provided with a free copy of the presenter's book on test process.

John Watkins holds Masters Degrees in Computer Science and Cognitive Psychology, has over 29 years experience in the IT industry, with some 25 years in the field of software-testing, and is a Fellow of the BCS. Having worked in the past on the teaching staff at the Open University, for GEC Marconi, and as the Software Quality Manager in Rational Software, John currently works as a consultant in the IBM Software Group, having just earned his posh pen for 10 years in harness. Most recently, John has been researching approaches to agile software development and testing in support of his new book on agile testing for Cambridge University Press (ISBN: 052172687X Pub. May 2009), and towards his doctorate in agile methods.

Workshop M2: "The Touring Tests"

James Whittaker, Microsoft, USA

Microsoft is engaged in a companywide effort to perform exploratory testing by using a tourism metaphor to guide manual testers. "Tours" of software represent testing guidance that will help testers choose which features to combine in a test case and how to assemble test data for very specific purposes. The idea is to synthesize testing guidance to make testers more purposeful and take much of the guesswork and randomness out of manual testing. James will outline the tours Microsoft is using and demonstrate how they work.

James A. Whittaker, now a Software Architect at Microsoft, has spent his career in software testing. He was an early thought leader in model-based testing where his PhD dissertation from the University of Tennessee became a standard reference on the subject. While a professor at Florida Tech, he founded the world's largest academic software testing research center and helped make testing a degree track for undergraduates. Before he left Florida Tech, his research group had grown to over 60 students and faculty and had secured over \$12 million in research awards and contracts. During his tenure at FIT he wrote How to Break Software and the series follow-ups

How to Break Software Security (with Hugh Thompson) and How to Break Web Software (with Mike Andrews). His research team also developed the highly acclaimed runtime fault injection tool Holodeck and marketed it through their startup Security Innovation, Inc.

Dr. Whittaker currently works at Microsoft as an architect for Visual Studio Team System where he is busy transforming his testing ideas into tools and techniques for developers and testers. He dreams of a future in which software just works.

Workshop A1: “Agility” in testing: Agile Testing and Selenium

Komal Joshi and Anand Ramdeo

Agile software development is everywhere. Organisations and teams have started adopting 'agile' development practices to allow flexible requirement and encourage more cooperation between programmers and customers. This leads to increased customer satisfaction as well as more rapid release of functional software.

The agile development practice requires 'Agile Testing'. Agile testing involves:

- Testing as early as possible and as quickly as possible
- Testing from the customer/business perspective.
- Testing often as the working software is delivered at the end of every iteration.

This demands a lot of effort from the testers. The situation often gets worse as the testing time is not accounted properly in the iteration and also due to the delayed delivery of the software testers have to work harder to get on top of the iterations. This leads to Testing team always lagging behind in the iteration and always developing a backlog of stories/bugs to test.

One of the ways to address this issue in Agile testing is to have as much automation as possible. Using of open source tools such as selenium would help a lot in Agile testing. But even selenium could not work wonders by itself unless there is a proper approach to Agile testing and automation by the Project.

This workshop will address the two issues highlighted above. It will first list and raise all the issues generally faced by the testing team in Agile Environment and then would suggest ways to organise the Agile testing. This workshop will

also familiarise the users with the best practices to be used in 'Selenium' automation. These best practices would help them to automate stories quickly and effectively and at the same time allow the automation framework to be flexible enough to respond to the frequent changes in the software which are part of agile development. Thus the testing team will always be on top of the iterations rather than lagging behind and building backlog.

***Komal Joshi** started her career with IBM Rational where she worked on the entire Rational Product Suite including Rational Rose, Rational Clear Case, Rational Portfolio Manager and Rational Method Composer (the next generation of Rational Unified Process). She has been very active in generating intellectual property and her two disclosures were rated as publish and are published on IP.com. One of her disclosures related to Automation tools has been successfully filed as a patent through IBM. Komal has been actively maintaining a website dedicated to software testing www.testinggeek.com. Currently she has started her own venture Atlantis Software Limited offering services of software test consulting, test automation outsourcing, and web development. Komal has presented papers in many international software conferences such as **Google Test Automation Conference 2008**, **Rational User Conference**, **Software Quality Symposium Asia Pacific**. She had also successfully organised a workshop on Selenium in **SIGIST Conference** in September 2008.*

***Anand Ramdeo** is current working as Head of QA for GCap Media where has setup QA department from scratch in Agile environment using open source tools. In past, Anand has worked with organizations like BBC, Amazon, IBM Rational and CSS in various capacities. Recently, he has completed his Masters degree, with distinction for his final thesis on skills and its relation to software testing. He is passionate about software testing, web technologies and open source. He co-founded and maintains www.TestingGeek.com and www.cityinapage.com.*

Workshop A2: The Testoff

Stewart Noakes, TCL Group

In these challenging times there is an increased emphasis on the cost of testing, the time to test and the quality of products in the market place. There will be an increased pressure on us to 'test smarter' and this will inevitably drive us all towards making step changes in being better, faster and cheaper.

In this very practical session we will pit three teams against each other in the testing of a single application, with each team being given a

different approach to their testing. At the end of the testing the teams will compare their approach, techniques and results to see which fitted the scenario best and which ones were the most effective, i.e. got the best results in the time available

Participants in this session can be from any background, as the testing will be done in teams and a blend of different skills and perspectives will be essential. This will be a very practical and tangible session, with an intense drive to find the most defects, and secure the most value from the testing, in the very tight timeframe.

Stewart Noakes, Chairman TCL Group Ltd (www.tcl-global.com), started in testing in 1996 and has been an engineer, coach, trainer, mentor and consultant for companies including: GEC Marconi CIS, X/Team & Transition Consulting Limited (TCL). Having founded TCL in February 2000, Stewart has developed testing enterprises in the UK, USA and India and has been at the forefront of the practice development at TCL. Academically, he is a visiting lecturer at the University of Bristol, Faculty of Engineering Management, and a guest speaker at the University of Exeter for a variety of Masters and Undergraduate degree courses. Read more about Stewart Noakes at the blog site: www.testingexperience.blogspot.com

Tactical test management – work with me

Lucinda Casey

Our special session for new and up and coming speakers will be delivered by Lucinda Casey who is a youngish female test manager (freelance) with over 10 years experience in software testing for major blue chip companies in pharmaceuticals, banking and retail.

Lucinda will discuss the importance of tactical test management and how the development team - the architects - the project managers - the environments - the programme and board team all need to work with the tactical test manager in order to go live with something everyone is moderately happy with.

AND FINALLY...

Please make a note of the dates of our conferences for 2009 as attendance is on the increase and so we'd really like you to book your place early to avoid disappointment.

Wednesday 17th June

Keynote:
"Two Futures of Software Testing"

Michael Bolton

Tuesday 22nd September

Keynote:
"Growing Our Industry: Cultivating Testing"

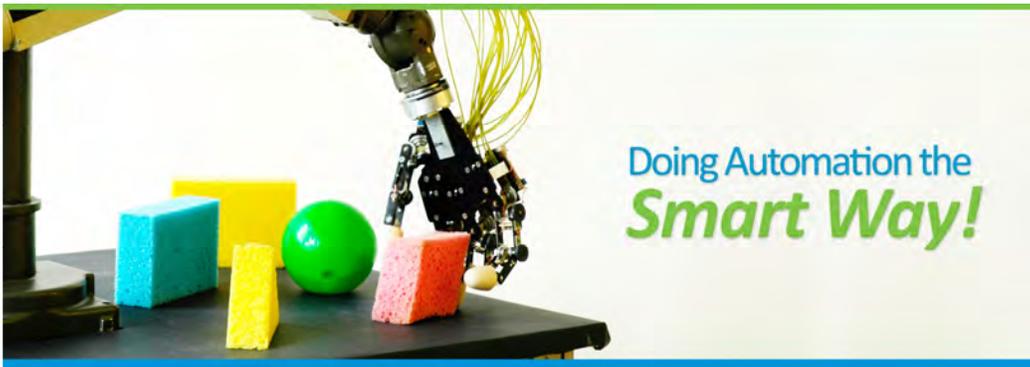
Isabel Evans

Thursday 10th December

Keynote:
**To be announced shortly
(see the website)**

Please enjoy the conference talks and workshops and please remember to make the most of the networking sessions and the exhibition.

Stephen Allott
Programme Secretary
BCS Specialist Group in Software Testing
stephen.allott@electromind.com



In today's competitive age, the high degree of customer interaction and increased intricacy of systems magnifies the risk of failure associated with software applications. Application test engineers need to cope with issues such as compressed project timelines, frequent application changes, lack of well defined business requirements, amplified security concerns and unpredictable user loads. Consequently, testing assumes a critical role in application development and maintenance. Test automation is looked at by corporations as a universal solution for reducing cost and effort associated with testing. But while addressing many of these problems; it should be known that automation in itself cannot unravel all of them.

Automation requires a significant up-front investment for building the automation test suite. In order to realise noteworthy returns, the scripts created need to be reusable and robust for all users to execute them. This can be ensured only if the automation objectives are defined in advance and the entire automation approach is well planned. The QA team should be equipped to identify automation opportunities, evaluate and select the right automation tool, adopt industry best practices in scripting and maintenance and thereby increase the return on automation investment.

Not everything is meant for Automation

Organisations try to automate all their software testing and have them executed as quickly as possible. However, it is always good to keep in mind that the investment on automation is very high and sometimes the cost-benefit of automating everything is not always advisable. Thus for successful test automation we may need to investigate the right set of tests that can be automated effectively and efficiently.



C2Auto helps in identifying the ideal Test Cases for Automation

To perform this, you need do an evaluation based on parameters such as frequency of execution, reusability of scripts, resource availability and dependency etc. One of the few decision-making tools in the market is Cognizant's "**C2Auto**", which follows a scientific approach to help the testers decide on the tests that can be automated cost-effectively.

Calculate Return on Automation Investment

Automation Testing involves higher initial investment in terms of tool procurements, training, scripting etc. However the costs associated with test

execution reduces over a period of time. Performing a return on investment (ROI) analysis on each automation project will help determine the types of automation that can be done for the project. This can also help us arrive at the tools that may be required for the successful completion of the automation project. Not only does ROI serve as a justification for the effort, but also is a necessary piece for the planning of an automation project.

From our experience, we have realised that projects that do not perform ROI calculations upfront end up wasting time and effort in non-essential areas. There are structured ways that automation teams can adopt to arrive at this value. For example, Cognizant's "**ROI calculator**" can help you derive an accurate return on automation investment.

The tool can compare short-term cost savings as well as the long-term gains for automated and manual testing in a project. It computes the savings from automation in terms of Cost and Effort, and thus provides high level statistical information for project management.



**ROI
Calculator**

Transparency

- Provides key project viability estimates
- Provides accurate Return On Automation Investment
- ROI estimate split provided across automation activities
- Provides the information about break-even point

Portability

- Web based tool (used anytime-anywhere)
- Independent of automation tool used
- Option to export reports and graphs

Ease of use

- Dynamic calculation of ROI
- Provides comprehensive graphical & tabular reports on
 - Cumulative Cost and
 - Cumulative Effort

Smart Approach to Test Automation

When crafting an approach to test automation, you need to consider factors that influence automation efficiency, such as ease of maintenance, portability of scripts etc. The objective of test automation is to increase application reliability, while reducing the time and cost of software quality programs during the test process. We at Cognizant have knitted together the entire gamut of tried and tested automation techniques to accomplish the following objectives:

- Ensure higher efficiency in automation and cutting schedules
- Ensure higher coverage
- Enhance reusability
- Ensure ease of maintenance and portability of scripts

Automation approach could be smart only when it supports test efforts involving automated test tools and incorporates a multi-stage process of how to introduce and utilise an automated test tool. The approach needs to cover analysis of requirements, automation test planning and test design while also addressing test execution and test management. All these elements, including tools and utilities, can be integrated to accomplish end-to-end automation. For example Cognizant's "Automation Tool kit" has the set of framework, tool evaluation approaches and utilities bundled together to ensure efficiency throughout the automation life cycle.

Approach to Tool Evaluation and Selection

Selecting the right tool for automation has been a challenge and this may require some tool usage experience which helps reduce the complexity, while ensuring adoptability and fitment. Prior knowledge on the technologies adopted for development is required to identify the list of tools that may best serve automation requirements. You may demand a demo or trial to pilot some of these tools in real-time to understand the suitability and effectiveness.



While deciding on the test tool, the schedule is reviewed to ensure sufficient time is available for test tool setup and development of requirements hierarchy. It is a good practice to map potential test tools and utilities to test requirements. It is also suggested to confirm test tool compatibility with the application and the environment. In case of any issues it is suggested to have a few workaround solutions investigated to address incompatibility issues that may surface.

Arriving at the Best-fit Automation Framework

Drafting a framework for automation is important to ensure maximum reusability, resulting in higher efficiency. It is suggested that Test Automation should be integrated into a centralised function that owns all the reusable components. This helps remove all redundancy in the system that may arise out of obsolete solutions and components. At Cognizant we have built an exhaustive framework for automation called "CRAFT".



CRAFT

CRAFT defines the method for scripting of business functionalities as reusable libraries that are repetitive among test cases

“CRAFT-Cognizant Reusable Automation Framework for Testing”, is a robust, end-to-end Automation framework. CRAFT defines the method for scripting of business functionalities as reusable libraries that are repetitive among test cases. This simplifies automated execution of large number of test cases by using a centralised engine (i.e., Driver Script) that invokes the relevant libraries as per test case requirements. Functionality based scripting paves the way for a reduced number of test scripts with maximum reusability and minimum redundancy. The driver script has the logic for calling different reusable actions in a sequence based on functionalities that are to be tested. The framework also has a Database Abstraction Layer, which has business scenario test data and provides input to the Driver Script for individual Test Script flows.



CRAFT 2.0 is a tool which streamlines the test execution activity during test automation; it dynamically executes the test cases in multiple machines in a distributed environment

Innovations that compliment Automation

There are many industry standard tools widely adopted by QA teams for automation. But the issue is that these tools predominantly address one or only few areas of automation and are to be customised to cater to all automation requirements. At Cognizant, we have built an entire gamut of innovative solutions to compliment the automation tools and process to increase automation efficiency. Some of the tools and utilities developed by our team are displayed below.

DataXpress

Data plays a vital role in testing and data generation has been the greatest challenge for most of the QA teams. To address this issue, Cognizant has developed an automated test generation tool named “Data Xpress” that helps QA teams to streamline the test data preparation activity through automatic generation of test data.

AHEAD & WIN2PRO

QA teams often face the challenge of migrating from one tool to another, or upgrading the current tool. At Cognizant we have built solutions to address these types of challenges. For example, “AHEAD” is a tool built to support bulk uploads, QTP scripts, attachments and folder structure to Quality Center. This significantly saves time and effort associated with manually porting these from one to another. Similarly “Win2Pro” performs quick migration of WinRunner scripts to QTP with minimum effort and time. The tool supports application user interfaces like Java, VB, Web and ActiveX. We have witnessed this tool reduce manual conversion effort by almost 80%.

LiBex

Automation efficiency can be enhanced only with increased reusability of scripts, functions and components. To facilitate this we have “LiBex”, which functions as a search engine to retrieve functions present in one or more libraries. It also facilitates easy download of functions thereby facilitating increased reusability.

ORGen

Conversion of object repositories into formats understandable by the system is often a challenge to most QA teams. To address this challenge, Cognizant has developed "ORGen" that will help eliminate all manual efforts by automating creation and conversion of object repositories from one format to other.

WS Test Professional

Testing web services applications has always been a challenge because of the absence of user interface. WS Test Professional is developed to address this issue, thereby making testing of web services easy.

Customise and use Open Source tools and Frameworks

From our experience we have realised that open source tools in many instances could be customised for use, thereby saving a cost associated with license procurement. Also open source offers greater flexibility and offers solutions for testing areas where industry standard tools are not available. For example, tools for testing web applications or automating testing for web-applications are still emerging. At Cognizant, we have customised few of the tools and framework available open-source to provide solution for web-testing and web-automation. For example, "WATIR Framework" is an open source functional testing framework customised to test any web application built on ASP, .NET, J2EE or PHP. Similarly "Selenium Test Manager", customised from Selenium, is an open source tool that aids web test automation. Defect management open source tool "Bugzilla" is customised and integrated with test management tools to take care of the defect management portion, helping to reduce procurement cost of licences.

Conclusion

QA organisations have looked to Test Automation as a viable option to address QA challenges related to reducing cost and ensuring higher coverage. It is suggested that prior to opting for automation, QA teams need to perform an exhaustive automation assessment. Test Automation in today's competitive environment is more needed than it is wanted; to keep organisations operating efficiently and considerably cut down costs and efforts, without compromising on quality and security. But it should just not be done per se, but after proper evaluation of its need, areas of implementation and ROI. Be a smart and progressive organisation, step forward to Test Automation.



Adrian O'Leary works at Cognizant Technology Solutions as Director of Testing Centers of Excellence for the Americas. Adrian has more than 16 years of experience in the Software QA and QC arenas. Adrian is very active in the QA Arena and founded and is past President of the Phoenix Quality Assurance Association a chapter of QAI, has sat on the Board of Directors for HP Software's Global User Community called Vivit and is a moderator on QAforums.com.



Pradeep Govindasamy works at Cognizant Technology Solutions as Manager of the Automation Center of Excellence for India. Pradeep has more than 10 years of experience in the software testing and development areas. Pradeep also heads up the R&D practice for automation and is an architect for its homegrown tools, which has provided huge value to clients.

2009 TESTING CALENDAR

There are many testing events throughout the year, not all of them run by the BCS.
If you would like your event added to this calendar, email me at matt.archer@ivarjacobson.com

January 2009						
M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

29th: UK Testers Forum - Annual Summit
London (<http://uktmf.com>)

February 2009						
M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

12th: Pub Exploration of Software Testing
Bristol (<http://pest-global.org>)

March 2009						
M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

4th: Software & Systems Quality Conf.
Dublin (www.sqs-conferences.com)

17th: SIGiST Conference
London (www.sigist.org.uk)

19th: TCL presents Dr James A. Whittaker
Exeter University (www.tcl-global.com)

April 2009						
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29th: UK Testers Forum
London (<http://uktmf.com>)

30th: Pub Exploration of Software Testing
Bristol (<http://pest-global.org>)

May 2009						
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14th: Pub Exploration of Software Testing
London (<http://pest-global.org>)

20 - 21st: Next Generation Test Conference
London

June 2009						
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17th: SIGiST Conference
London (www.sigist.org.uk)

25th: Pub Exploration of Software Testing
Leeds (<http://pest-global.org>)

July 2009						
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16th: Pub Exploration of Software Testing
Bristol (<http://pest-global.org>)

29th: UK Testers Forum
London (<http://uktmf.com>)

August 2009						
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13th: Pub Exploration of Software Testing
Leeds (<http://pest-global.org>)

September 2009						
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17th: Pub Exploration of Software Testing
London (<http://pest-global.org>)

22nd: SIGiST Conference
London (www.sigist.org.uk)

October 2009						
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15th: Pub Exploration of Software Testing
Bristol (<http://pest-global.org>)

28th: UK Testers Forum
London (<http://uktmf.com>)

November 2009						
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12th: Pub Exploration of Software Testing
Leeds (<http://pest-global.org>)

30th - 3rd Dec: EuroSTAR Conference
Stockholm (www.qualtechconferences.com)

December 2009						
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3rd: Pub Exploration of Software Testing
London (<http://pest-global.org>)

10th: SIGiST Conference
London (www.sigist.org.uk)

DALAI LAMA CONCLUDES THAT COMPASSION GETS BETTER RESULTS THAN ANGER

Why do we need to improve our interpersonal skills?

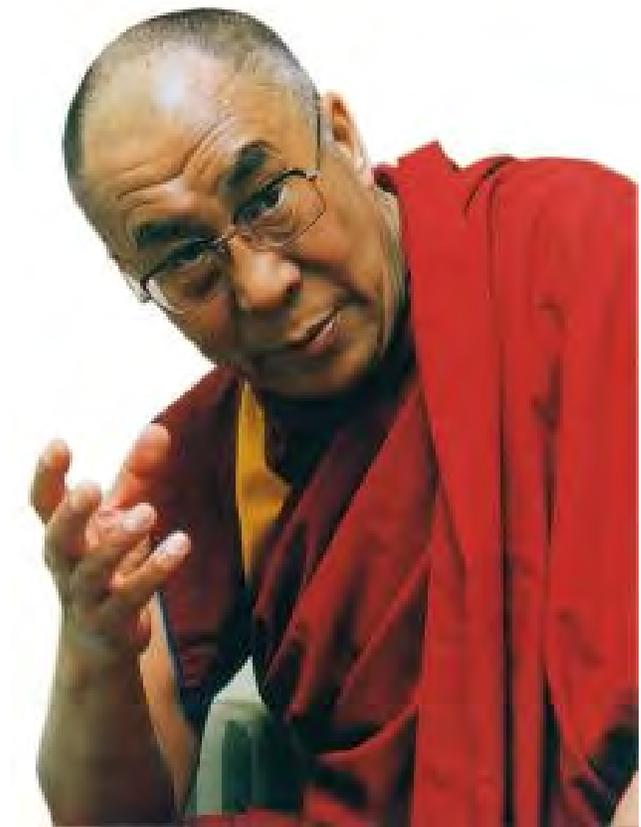
Having talked to delegates at the December SIGIST Conference, it was evident that organisations that engaged in promoting better people skills with 2-way effective communication practices enjoyed a more productive and enjoyable workplace environment.

This was evidenced by tales of support and collaboration inter and intra-team activities where conflicts were resolved for the benefit of the project's successful pathway. The immediate outcome was for working relationships to be conducted in a professional, success-orientated fashion where barriers to improvement were removed by shared goals and commitment.

So, how did this happen? - can we all benefit? - can teamwork improve?

Understanding the impact we have on others of our attitudes and behaviours, even the way we speak to managers and colleagues, can greatly improve their workplace habits, having the skills to place benefits over content, taking other people's view into account, recognising and eliminating personal and team time stealers are among the techniques used to make the tester's world a healthier and more effective place to be.

Workplace stress was mentioned as being an ever-present symptom of poor practices and this can result in knock-on effects of absence monitoring, personal wellbeing, motivational levels, exhaustion and lower contribution to the overall organisational ethos. The more proactive firms have come to terms with this concept of increased workplace engagement leading to more loyalty and higher performances with higher cost efficiencies and the action of employing better people skills to work for the good of us all.



The need for up-to-date practices can be appreciated by all of us, more so in the current economic and political climate, and businesses can see better benefits implementation by more attention being given to enhanced interpersonal skills.

Better 'soft' skills are hard to achieve but can lead to an ongoing performance improvement with industry and opinion leaders postulating the need for these skills to help us through the 'war on talent' and 'credit crunch'. As Peter Drucker states "accept the fact that we have to treat almost everybody as a volunteer", so if we improve our relationship skills, it will help ALL concerned - baby boomers, Generation Y, leaders and even **YOU!**

Chris Whelan is an independent learning and development coach and is helping Stephen Allott of ElectroMind develop a coaching and mentoring programme for its corporate clients.

To comment on this article please email chris.whelan@electromind.com or for more information on our coaching programmes please email peopleskills@electromind.com

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THE **TESTER**

June 2009 Issue

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2 KEYNOTES (p9 – p16)

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Wednesday 17th June 2009

Next Conference: Who Practices the Testing Theory?

Keynote Presentations

- Two futures of software testing
- Top ten controversies in IT today

Track Sessions

- Pragmatic testing: the middle way
- What the black box tester didn't see
- Successful Agile Development with 100 people

Interactive Workshops

- Sourcing Strategies: What are your options?
- Good Practice Does Not Ensure Success
- Questioning Testing Myths: Critical Skills for Testers



Please note that any views expressed in this Newsletter are not necessarily those of the BCS.

FROM THE EDITOR

Matt Archer, Editor

Welcome to the June edition of *The Tester*, which announces our upcoming AGM, including our Treasurer's Report for the year ending April 30th, 2008. The good news is that we continue to cover our costs, which means we can continue to bring you a bigger and better SIGiST. If you have any thoughts about what a bigger and better SIGiST would mean to you, feel free to contact myself (matt.archer@ivarjacobson.com) or any of the other committee members to discuss your ideas.

In the last edition of *The Tester*, Rhiannon Thomas shared her experiences of managing and motivating an offshore test team. In this edition, I am delighted to include a follow-up article on how to maximise the benefits of working with an offshore team written by Rakesh Dash, an offshore Test Analyst based in India. We also have another superb article by Michael Bolton who reminds us that whilst planning is essential, nothing can replace the value of skill and adaptability. If you like the Michael's approach to Rapid Software Testing, we are fortunate enough to have him as our first keynote speaker at the June conference. I encourage you to attend this event and listen to what I guarantee will be a talk on testing you will never forget.

If you are inspired by reading the 2 fantastic articles in this edition and would like to become a published author in *The Tester* yourself, then please email me at matt.archer@ivarjacobson.com.

I look forward to seeing you all at the conference in June. In the mean-time, happy testing!

Matt Archer

The Tester Editor
BCS Specialist Group in Software Testing
matt.archer@ivarjacobson.com

SIGIST CONFERENCE BOOKING INSTRUCTIONS

**If you would like to pay online,
you can use our new online
booking and payment system.**

www.bcs.org/events/registration

**If you would like to pay by
cheque, you can download a
booking form.**

www.bcs.org/upload/pdf/sigist-2009-booking.pdf

**If you have a query relating to
making a booking, please contact
Gemma Liddiard, Specialist
Groups' Officer.**

**Tel: (01793) 417656
gemma.liddiard@hq.bcs.org.uk**

WEBSITE LINKS

**BCS SIGiST website:
www.SIGiST.org.uk**

**SIGiST Standards Working Party:
www.testingstandards.co.uk**

**SIGiST UML Testers Forum:
www.umltesters.org**



SPECIALIST GROUP IN SOFTWARE TESTING

Notice of Annual General Meeting

Notice is hereby given that the Annual General Meeting of the British Computer Society Specialist Group in Software Testing (SIGiST) will be held on Wednesday 17th June 2009. The venue for this meeting will be the Royal College of Obstetricians and Gynaecologists – RCOG.

Agenda

- ❖ Minutes of Previous AGM and Matters Arising

- ❖ Reports
 - Chair
 - Treasurer
 - Standards committee

- ❖ Constitutional changes
 - To be agreed

- ❖ To consider any nominated business

Items for inclusion on the AGM agenda should be emailed to Michael.HENDRY@unum.co.uk. Additions to the agenda must be received no less than fourteen days prior to the meeting.

Test Maturity Model integrated (TMMi)

Workshop

in conjunction with



Wednesday 20th May 2009 - 9.30am to 5.00pm

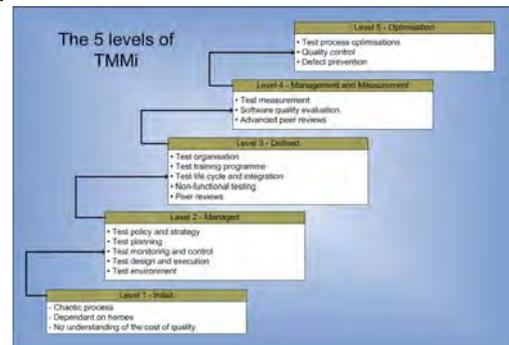
The Royal Automobile Club, 89 Pall Mall, London, SW1Y 5HS

(10% discount for *The Tester* readers)

In a recent survey of CEO's and their strategies to contain costs in the coming year, improving IT processes came top of the list. This not only demonstrates that CEO's know a lot more about the workings of IT than they did in the past, but also that they are aware of the tangible benefits associated with improving IT Process efficiency. The impact of process improvements throughout the SDLC can have a major impact not only on IT's capabilities to deliver, but also the knock on affect to the business.

Overview of the workshop: The aim of this workshop is to provide background and to help the attendees understand how to deliver qualitative and quantitative process improvements using the TMMi model.

It explains in detail what TMMi is, and why it is different from other models. To help understand the benefits of the TMMi model, the day will also include a quick assessment which will provide an indicative view of where within the 5 levels of TMMi, each delegate's organisation, project or team is currently positioned.



Throughout the day we will relate our experiences from the delivery of numerous TMMi assessments and provide practical remedies and strategies to make an effective difference.

Finally there is a review of a recent TMMi survey undertaken by Experimentus to obtain a view of the trends in the software testing industry today.

The workshop is £500 excluding VAT (please quote SIGIST05 for a 10% discount, £450 excluding VAT).

Suggested Attendees: Head's of Testing and Quality, Process Improvement Specialists, Enterprise Architects, Programme/Project Office, Test Managers and Test Analysts

To register or for further information, please contact Abigail Singleton

Email: abby.singleton@experimentus.com

M: +44 (0) 7739 461 061

T: +44 (0) 870 770 6099



MAXIMISING THE BENEFITS OF WORKING WITH AN OFFSHORE TEAM: THE VIEW FROM OFFSHORE

This article has been created based on feedback obtained from Testers currently working for different organisations in India. Those interviewed have been working as Testers for the last five to seven years.

Background

Offshoring has always been considered as a low-cost alternative only. It is said that "cheaper is not always better", yet offshoring continues to thrive. The reason for this flourishing business can not just be the "cost factor". There is a potential to achieve additional benefits, but these often go unnoticed.

There are a large number of offshore Test Teams, working on a large number of applications in a large number of different organisations, using a large number of techniques. This suggests that there should be a large number of differences between the teams. However, on closer examination, these teams have similar characteristics, most of which are not obvious to the onshore project community.

The offshore Test Teams no longer prefer to tag themselves as "low-cost" service providers. Instead they pride themselves on their technical and testing skills, and identify themselves as specialists in areas such as automation and techniques. They have progressed to form "Centres of Excellence" that deliver high quality services. This transition from "low-cost" to "specialists" has happened over time and with some effort. However, this transition does not appear to be widely known to the onshore project community, who often see offshore teams as only "body shops".

Apart from being low-cost, what else can an offshore team provide?

The cost factor has been so dominant in offshoring that other important factors often go unnoticed. These factors, if given the desired emphasis would benefit both teams - onshore and offshore. Offshore teams are proficient at finding people with the required skill and expertise, often in a short time period. Offshore Testers are adept in various testing (and development) methodologies, and there is generally a higher resource pool of expertise in automation tools. Hence they have a potential to undertake various aspects of testing during a project lifecycle.

One of the areas that an offshore team likes to concentrate on is "Productivity". They constantly strive to "do more with less". Even during "quiet periods", when there is not much work coming from onshore, offshore teams have something to offer. This includes creating or updating a Regression suite, maintenance of the test management tool, or automating manual test cases.

Offshore teams work well within the schedules they are set, as long as the schedules are realistic. The occasional delays that do happen are mostly due to incorrect estimation, and not due to slip-offs from the test teams. Due to stringent deadlines and lack of exposure to the end Business users of the application, the offshore Testers refrain from practicing "exploratory testing", and follow the requirements rigidly. However, certain offshore teams, who have been in contact with the end-users and acquired some system knowledge, contribute more as they get a chance to perform exploratory testing during the project, without any additional cost to the client.

Interaction between offshore and onshore

Off and onshore teams have to regularly interact, and the offshore team prefer to work through one point of contact onshore. Interactions can happen with the onshore staff through instant messaging chats, email, telephone calls and / or video-conferencing (where the experienced offshore members feel comfortable putting forward their views). Where the onshore point of contact is a Test Manager, the offshore teams prefer someone who is easy to approach. When

the Test Manager is unavailable, or where the business model does not have an onshore Test Manager, the teams require an Onsite Co-ordinator as point-of-contact. Having a single person to contact usually means faster responses to queries.

When it comes to using the telephone, occasionally offshore teams have issues with UK accents and vocabulary. So the rule here is that the onshore teams need to keep the vocabulary simple.

In team meetings, apart from the 'usual' project status reporting the offshore teams also like to discuss various other project aspects. These can include defect / scripts status, trend analysis of defects rejected, root causes of defects, post implementation metrics after every release, productivity analysis, *etc.* All these analysis and metrics allow the offshore teams to investigate areas of improvement (if any) which they can then suggest to the onshore team. For this to happen, the Test Manager must be open to ideas and to giving a chance to implementing the suggested improvements. However, the Test Manager must also be clear if they think something won't be beneficial.

What the offshore test teams need

Offshore teams are eager for knowledge. This can be knowledge about the application under test, different testing techniques and approaches, and the use of different testing tools. Don't just use an offshore team for repetitive regression test case running. Give them something challenging to do, and they and the project will benefit from their enthusiasm.

Showing appreciation to the offshore team, and to individual members, when a project goes live (without too many faults) does them the world of good. Their confidence is boosted, and the fact that their efforts are appreciated, brings out the best in them for subsequent projects. Hence an appreciation mail for a job well done is very essential. Sometimes the offshore teams have to put in extra efforts in terms of working hours, to eliminate the time-zone difference. Even this calls for a thank you, which can be forgotten in the melee that often occurs in the run-up to go-live. Highlighting an individual's efforts and showing them appreciation encourages the person, and the team to deliver better.

Some offshore teams have processes in place that they have to follow, for example, in a CMMI level 5 company. The onshore teams need to understand and appreciate this. If they do not agree to certain processes then a trade off must be arrived at to maintain the balance.

Summary

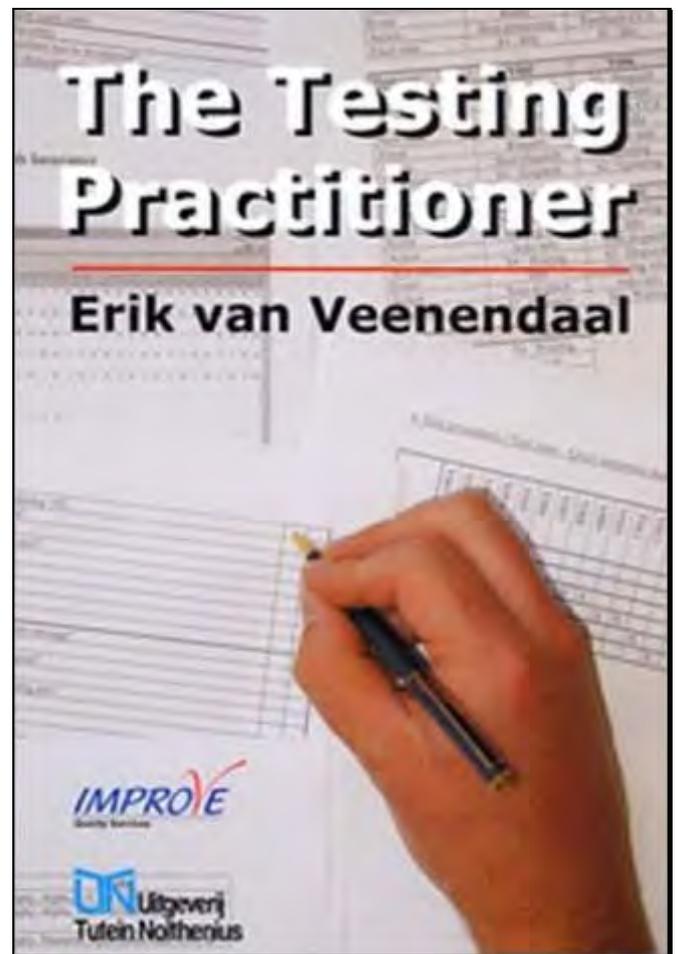
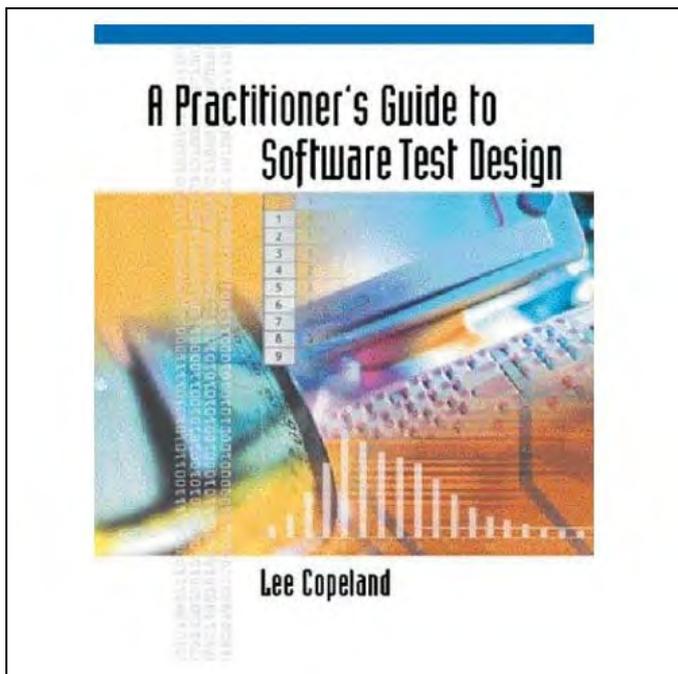
The onshore community might not be completely unaware about the above facts but they might be unaware about how important they are to the offshore team. Addressing all or some of them would improve the output from the offshore team. This in turn would make onshore more happy to offshore work, and offshore would be more willing to deliver better quality products, at a cheaper rate of course.



Rakesh Dash holds the ISTQB Foundation Certificate in Software Testing and a B.E. in Electronics and Telecommunications. He is currently a Test Analyst, based in India, for an international financial organisation, where he works in both manual and automated testing.

TEST EDUCATION FOR FREE

Our SIGiST librarian, Sue Atkins, has kindly agreed to bring a selection of books from the SIGiST library to the June conference. For anyone attending, this presents an excellent opportunity to browse a range of testing books and identify any gaps in your testing knowledge. If you see something you like, you can take it away and read it in your own time – free of charge. The books will be displayed outside of the main hall.



SIGIST LIBRARY

Looking for a testing book but not sure which topics are covered? Or are you trying to decide which testing book to buy? Or do you simply want to increase your testing knowledge? If the answer to any of these questions is 'yes' then the SIGiST Library could help!

The SIGiST Library has lots of testing books covering a variety of topics and they are available to borrow for a period of 4 weeks - free of charge. Extended loans are allowed as long as the book has not been requested by another SIGiST member.

Topics include (amongst others) Requirements testing, Reviews/Inspections, Test Management, Test Techniques and Test Process Improvement.

If you would like to know more about the library and books available, or for any queries, please contact Sue Atkins on 01697 748 748 or email her at siglib@iotest.com. Happy Reading!

TEST? DRIVE!

How do you know where you are? How do you know where you're going? If you're driving a car, most of the time you're looking out of the windows. You make direct, immediate observations of the road, the traffic, and the landscape around you. You observe the road signs and the weather, and make small decisions constantly, adjusting your speed and direction, typically by minute amounts. The mirrors reveal things you can't see—if you're going too slowly, your future is right behind you, and it's probably gaining on you. You leave a comfortable amount of space between you and the car ahead, so there's room to stop or steer out of trouble. Mostly you don't look at a map at all. Whether the territory is familiar or new, the most important things about the route are in your head. If there's a diversion due to road work or traffic, you can adapt quickly and easily. Maps and travel books are very rough approximations of reality (they can't convey what the views will look like today, nor whether that restaurant is still open), so you treat them as guides, not rules. You don't worry much unless you're wildly off—and even then, it might be okay.

Your plan is not your destiny; at most, it's a destination and set of goals that you were interested in accomplishing at the beginning of the trip; it may or may not be written down, and along the way you may discover things more important than those in your original plan. You do measure, but you neither predict nor measure your journey down to the mile, nor do you monitor your consumption of petrol down to the milliliter. Just as on the shorter trip, you still do most of your observing by looking out of the window, listening to the sound of the engine, glancing at a dashboard every now and again, feeling the car respond as you climb hills and round corners. Speed limits are one thing, but you ask and answer the question "am I going to fast?" first and foremost based on information delivered by your senses.

That kind of measurement is founded on direct sensory intake. It's mostly immediate, obtained with an absolute minimum amount of fuss and instrumentation. We tend to use dashboards to help with more quantifiable measurements, but we're rarely using them for anything longer than a glance. Instead, we're in a constant cycle of looking around, asking "What do we need to do?" (and sometimes "What more do we need to know?"), and making small course corrections. In *Quality Software Management, Volume 2*, Gerald M. Weinberg calls this "First-Order Measurement". It's the kind of measurement that provides the most direct focus on appropriate action—"am I going too fast?"—than

on correctness—"What is my precise rate of speed?"

Now: how do you test a piece of software?

Many organizations create heavyweight, ponderous, documentation-heavy test plans, presumably to match their heavyweight, ponderous, documentation-heavy development plans. Such groups often create test scripts that attempt to identify every action that the tester must perform. The tester follows the script, which prevents her from noticing things that the script doesn't cover, and which inhibits her ability to learn and adapt from her own experience. This is expensive, time-consuming, and runs a very real risk that the product and the test plans will get out of sync. So how could we test a piece of software most effectively?

I'll suggest that it's like a long road trip, with the product as the territory we're exploring. Whatever the plan, we'll be observing and interacting with whatever part of the product is available right now. We'll make our plans lightweight and flexible, choosing not to put too much down on paper before we've seen the product at all. If there are specific things that we need to check, we'll note them, but keep the guidance for ourselves and our fellow testers concise and inexpensive. Like maps, requirements and specifications might suggest where to look, but direct observation and interaction with the product gives us instant information about where we'll want to look in more detail. There will be unexpected diversions en route so adaptability is important. Wherever we are, we can always stop briefly, get out and look around, chat with the locals (the programmers, business analysts, or product owner), to report on what we've seen, and to learn what they find to be most interesting. We use retrospectives as a mirror to remind us of the road behind us. We might have tools, but they're only there to assist our work, not to do it for us. If we're training others, we'll soon see that they learn far more quickly and powerfully from their own experience, combined with close, personal supervision and mentoring.

Like driving, testing is a complex, cognitive activity that happens in real time. While planning is essential, nothing can replace the value of skill and adaptability. Instead of burying our heads in the map, let's keep our eyes on the road and our hands on the wheel.

Michael Bolton lives in Toronto and travels the world teaching Rapid Software Testing—a course and a methodology for doing excellent testing more quickly, less expensively, and highly accountably—developed with senior author James Bach.

PROGRAMME COMMENTARY: WHO PRACTICES THE TESTING THEORY?

Stephen K. Allott, Programme Secretary

I'd like to extend a very warm welcome to you all for our summer conference which also includes our annual general meeting (AGM). The AGM is important as it gives you an opportunity to give us some feedback and have your say in how the SIGIST is run and help us to understand how we can improve our services in the future.

Our theme for June is "Who practices the testing theory?" and the talks are all from people with very many practical ideas and experiences of software testing. Feedback from our delegates over many conferences has suggested that these talks which provide practical hints and tips based on real people's experiences are the most useful of all the sessions we have delivered.

- We have two excellent keynote speakers for June. I'm delighted to be able to welcome Michael Bolton of Developsense, Canada, who will give us some insights into two futures of software testing. I'm also very pleased to welcome back to the SIGIST Lloyd Roden of Grove Consultants, a former SIGIST and EuroSTAR programme chair who will tell us his top 10 controversies in software testing.
- Listen carefully to Mark Crowther of NMQA who takes us on a journey called Pragmatic testing – the middle way.
- Don't miss Tim Hunter, an independent testing consultant, explaining with some real examples what the black box tester didn't see.
- If you doubt the new generation of methodologies, learn from Nigel Kneill and Amy Phillips of Guardian.co.uk about Successful Agile Development with 100 people.
- The new and upcoming speaker this month taking advantage of our Share Point slot is Sarah from HBOS who will review the book "How we test at Microsoft". A copy of this book is now available in the library.

Please book early, especially if you want to attend a workshop – these workshops are designed for your participation are limited to the first 16 people who register online (www.sigist.co.uk). Please note the workshops run alongside the main talks so you cannot

attend both – why not bring along a colleague or two, attend all the sessions as a team and swap notes later.

I'm always on the lookout for new speakers so please download our 2009 call for papers from the website and follow the instructions to submit your ideas for a talk or a workshop.

Enjoy the conference.

Stephen K. Allott

Programme Secretary
BCS Specialist Group in Software Testing
stephen.allott@electromind.com
+44 (0) 7734 761363

**PLEASE DON'T DELAY,
BOOK TODAY**

**These one day events are
becoming ever more popular.**

**Please don't delay, book now to
secure your place and avoid
disappointment.**

**The workshops sell out quickly
and numbers are strictly limited
to 16 participants depending on
your choice.**

**Please note (because people ask
every time) that the workshops
run alongside some of the talks
and so you cannot do both.**

JUNE 2009 CONFERENCE PROGRAMME

BCS SIGiST – Who Practices the Testing Theory?

Wednesday 17th June 2009

Royal College of Obstetricians and Gynaecologists

27 Sussex Place, Regent's Park, London NW1

08:30	Coffee & Registration, Tools & Services Exhibition opens		
09:15	Introduction and AGM Stuart Reid, SIGiST Chairman		
09:45	Opening Keynote		
09:45	Two futures of software testing Michael Bolton, Developsense, Canada		
10:45	Tea/coffee break Opportunity to visit the Tools & Services Exhibition Browse a selection of testing books from the SIGiST Library		
11:15	Pragmatic testing – the middle way Mark Crowther NMQA	Workshop M1 Sourcing Strategies: What are your options? Andy Redwood Independent consultant	Workshop M2 Good Practice Does Not Ensure Success Chris Comey Testing Solutions Group
12:00	What the black box tester didn't see Tim Hunter Independent consultant		
12:30	Networking session and commercial break		
12:45	Lunch break Opportunity to visit the Tools & Services Exhibition Browse a selection of testing books from the SIGiST Library		
14:00	Top ten controversies in IT today Lloyd Roden Grove Consultants	Workshop A1 Questioning Testing Myths: Critical Skills for Testers Michael Bolton Developsense, Canada	
14:45	Successful Agile Development with 100 people Nigel Kneill / Amy Phillips Guardian.co.uk		
15:30	Tea/coffee break Opportunity to visit the Tools & Services Exhibition Browse a selection of testing books from the SIGiST Library		
16:00	Book Review – “How we test at Microsoft” (Sarah Salahuddin – HBOS)		
16:15	Surprise Ending Michael Bolton, Developsense, Canada		
17:00	Closing Remarks		

The SIGiST committee reserves the right to amend the programme if circumstances deem it necessary
Workshops will have limited places, to avoid disappointment try to book in advance.

Opening Keynote: Two Futures of Software Testing

Michael Bolton, Developsense

Niels Bohr, Woody Allen, or Yogi Berra (and perhaps all three) once said "Prediction is very difficult, especially about the future."

Michael Bolton rises to the challenge and dares to present TWO futures of software testing. In one vision of the future, testers are the gatekeepers, responsible for assuring product quality. Testing follows a rigorously controlled process, and ad hoc testing is banned. Testers are kept separate from the developers to foster independence and objectivity. Senior testers work from extensively detailed specifications, creating plans, drawing state diagrams, and compiling test scripts from the inception of the project until coding has finished. At that point, any tester, no matter how junior, can read and follow the scripts—testing can even be entirely automated—so that management can be sure that the code is bug-free. All decisions will be based on solid numerical data. Changes to the product will be resisted so that risk can be eliminated. This vision, which contains a number of truly bizarre fantasies, is the dark vision of the future.

In the other view—the bright future—testers are active investigators, critical thinkers, and highly skilled, valued members of the project team. Testers neither accept nor desire responsibility for releasing the product; instead, testers provide important, timely, credible information to managers so that they can make sound and informed business decisions. Testers work collaboratively not only with the developers, but with the entire project community, and are able to report at any time on product and project risks. Testers have an extensive understanding of tools and automation, and decide when—and when not—to use them. Most importantly, testers embrace challenge and change, adapting practices and strategies thoughtfully to fit the testing mission and its context.

Where are we now, and where are we going? In this interactive one-hour presentation, Michael shares his visions of the futures of software testing, and the roles of the tester in each of them. The presentation includes a brief exercise and a dialogue, encouraging discussion and debate from the floor. This presentation was voted the most popular track session and won

the CapGemini Award for Innovation at the 2008 EuroSTAR Conference.

Michael Bolton is a tester, consultant, and testing trainer and a leader in the context-driven software testing movement. He has over 20 years of experience in the computer industry testing, developing, managing, and writing about software. Currently, he leads DevelopSense, a Toronto-based consultancy. Prior to that, he was with Quarterdeck Corporation for eight years, during which he delivered the company's flagship products and directed project and testing teams both in-house and around the world.

Michael has been teaching software testing on five continents for seven years. He is the co-author (with senior author James Bach) of Rapid Software Testing, a course that presents a methodology and mindset for testing software expertly in uncertain conditions and under extreme time pressure. Michael was an invited participant at the 2003, 2005, 2006, and 2007 Workshops on Teaching Software Testing in Melbourne and Palm Bay, Florida; was a member of the first Exploratory Testing Research Summit in 2006. He is also the Program Chair for TASSQ, the Toronto Association of System and Software Quality, and a co-founder of the Toronto Workshops on Software Testing. He has a regular column in Better Software Magazine, writes for Quality Software (the magazine published by TASSQ), and very sporadically produces his own newsletter.

Michael lives in Toronto, Canada, with his wife and two children.

Michael can be reached at mb@developsense.com, or through his Web site, <http://www.developsense.com>.

Pragmatic testing – the middle way

Mark Crowther, NMQA

Most of us start out like the novice backpacker who takes every piece of equipment they can think of for a weekend camping trip. Eventually we start to discard what isn't needed and in our confidence tend to go too far, leaving ourselves open to mishap.

With the heavyweight and agile camps vying for followers testers too often find themselves staggering about their journey through multiple projects trying to follow one camp after another. Yet in doing so they fail to realise two things, a) neither camp can ever be 100% right for them and, b) they will at some point have to fend for themselves.

This is the sharing of my experiences over the last 10 years of managing software testing by the use of Heavyweight test management systems to

ultra lightweight, near chaotic ones – then back again. How my formal training in both camps demonstrated they were right and yet wrong, worked and yet failed for me and the realisation they always would.

A journey that has resulted in my adoption of an approach which I'll share and the perspective there's a 'middle-way' to modelling of test approaches, that demands we have confidence in our own perspectives and ability and that will ultimately win out over others.

Mark Crowther is Head of Professional Services at NMQA Ltd and is responsible for a team of consultants, customer relationships, research and teaching. He has 11 years of QA and Testing experience, including being QA manager in electronics manufacturing, a lead ISO9000 Assessor, software test manager, coach and mentor. Mark can be contacted at mcrowther@nmqa.com

What the black box tester didn't see

Tim Hunter, Independent consultant

Change Control was the earliest attempt to enforce disciplined working practices on IT departments. That was followed by the 'fix on fail' culture, which involved the introduction of 'incident teams' who would spend time fixing 'faults'. However, the advent of service level agreements led to demands to for new systems to be subjected to formal testing processes, to reduce the risk of disrupting live IT services.

Formal testing started out with structured 'Waterfall' 'stage by stage' approaches. Variations on this theme have been introduced, with most projects probably using a mixture of approaches. A reaction to this disciplined way of working has come in the form of Agile. There is some concern about Agile amongst the Testing community. According to its 12 principles, Agile Development, will:

- Deliver working software frequently.
- Working software over comprehensive documentation.
- Welcome changing requirements, even late in development.

There is no mention; however, of how you arrive at the conclusion the software **is** working. There is no mention of 'Testing' or 'Quality' in the 12 principles. To welcome changing requirements may be considered to be advantageous by some, and many programmers will no doubt welcome

less emphasis on documentation. The type of ideas, however, proposed by Agile, remain an anathema to the formal testing school.

To resolve the Agile/Waterfall debate, Yorview proposes 'Quality Driven Development' (QDD). The key differences between QDD and traditional methodologies (which are usually Implementation Driven) are:

- Extending the scope of 'Testing' to include Audit as well as Inspection. Using QDD you can audit the processes of development.
- Establishing when a stable release has arrived at, and only setting the 'clock ticking' on testing time from that point onwards. NB this does allow for the type of evolutionary/iterative 'prototyping' phase favoured by advocates of Agile. Any testing time up to the stable point being reached, is called 'Development by Test' Time (DBT). This is charged to the project as Development time, not testing time.

Tim Hunter MBCS CITP PGD CCI (Open) is an IT consultant for [Yorview](http://www.yorview.co.uk) (www.yorview.co.uk). He has over 28 years experience of IT development and testing, gained in major companies throughout the UK and Europe.

After 10 years of running his own IT consultancy, Tim has launched his own Quality Driven Development methodology which he hopes will resolve the Agile/Waterfall debate.

Tim also has his own 'IT Quality' Blog on the BCS website.

Afternoon Keynote: Top ten controversies in IT today

Lloyd Roden, Grove Consultants

Having been in the IT industry since 1980 it is my belief that we form habits and do things without actually thinking, some of these habits are good but some are not. It is good to challenge what we do and why we do it on a regular basis.

During this session I shall confront 10 key aspects in IT which is guaranteed to make you think about what you do and why you do them. You may not agree with everything I say and in some instances may object, but this session will undoubtedly make you stronger in what you do believe in.

How humans react to controversies

The study of human behaviour is a fascinating and very complex subject. Our emotions make up a huge part of our personalities and when we are presented with a confrontational situation each of us will react in a very different way.

Some people thrive on confrontation whilst others may recoil at the thought of it. Before we look at my top 10 controversies we shall take a look at how we might behave and what our human reaction could be. It is my view that "good confrontation" is beneficial to us and makes us stronger in what we actually believe in – this in turn leads to more passion, drive and determination. The alternative is apathy and complacency.

My current top 10 controversies within IT

10. Walkthroughs will expose author's inadequacies
9. Bug logs are important even in Agile
8. Best practice doesn't exist and can be harmful
7. Boundary Value Analysis is a developer technique
6. Certification plays a vital role in defining our profession
5. Management and development should be judged on quality and not time
4. Test estimation is wrongly performed
3. We don't mean the entry criteria we set
2. We lie with metrics
1. Test Managers should test

How to apply this in our workplace

It is my hope that you would be challenged in your thinking in at least one of the 10 areas. It is all very well to be challenged, but what can you do next? How can we make a difference and change other people's mindsets? During this session I shall provide some tips for implementing changes and also a personal action plan.

Lloyd has been involved in the software industry since 1980, studying computer science at Leicester University. He joined Pearl Assurance as a programmer in 1983 and worked there for five years before becoming a Senior Independent Test Analyst for Royal Life. Three years later he joined Peterborough Software where he became project manager for the Product Assurance department. He also set up and managed the Independent Test Unit for nearly 3 years. During his 8 years at Peterborough Software he worked through key issues in test management such as; testing to pre-defined deadlines, managing a test team, successfully implementing and using test automation tools and building quality into the testing process. He joined Grove Consultants in April 1999.

Lloyd was chairman of the QARun User Group for three years, and is a lively and enthusiastic speaker at

conferences and seminars. He has been a keynote speaker at EuroSTAR, AsiaSTAR, STAREast and STARWest and he has also spoken at SQE Automation, Test Congress and Unicom conferences as well as Special Interest Groups in Software Testing in a variety of different countries. Lloyd, together with the other members of Grove Consultants, jointly chaired the first SQE Test Automation Conference in 2001.

Lloyd has been Programme Chair for both the tenth and eleventh EuroSTAR conferences. He won the EuroSTAR Software Testing Excellence Award in 2004 in Cologne.

At Grove Consultants, he provides consultancy and training in all aspects of testing, specialising in test management, people issues in testing and test automation.

Successful Agile Development with 100 people

Nigel Kneill / Amy Phillips Guardian.co.uk

This presentation will provide insight to the successful implementation of Agile software development at Guardian.co.uk and provide understanding of the key factors that achieved fortnightly releases of business quality software from a large project team.

It will tell the story of how business commitments were made while allowing ambiguity of requirements, how the scope and velocity was managed to achieve project completion to schedule and within budget, how knowledge was shared to support agility, how the process and team dynamics evolved to achieve certainty over the fortnightly release schedule, and how stakeholders were delighted with the results.

The presentation will provide contextual understanding of the project and more detailed information on the testing process. It will provide the opportunity for testing practitioners to ask questions about the practicalities of effective testing and quality assurance within a real world project that demanded ambiguity, invited change, developed and delivered in the most rapid manner and involved over 100 people.

Nigel has over 30 years experience of software development. For five years he has been at the forefront of the large scale use of Agile/Lean techniques. While he has experience of managing Systems and Integration testing teams his expertise lie with the management of large software development programmes.

Amy Phillips is QA Manager at Guardian.co.uk. She graduated with a degree in Software Engineering and has four years experience as a QA working in a variety of test environments including V-Model and Agile.

Book Review: "How we test at Microsoft"

Sarah Salahuddin, HBOS

Sarah Salahuddin is currently working as a Senior Test Analyst at HBOS; she is also in the last year of her PhD at the Department of Computer Science, University of Sheffield in the Verification and Testing Group. Her current research focuses on changes to state machine test sets. Before starting her PhD Sarah was working as a software test engineer for almost four years, involved with testing a variety of software projects and products. Sarah has a Bachelor's degree in Computer Science from National University of Computer and Emerging Sciences, Lahore, Pakistan. She has attended several testing conferences and has also been a speaker at AsiaSTAR 2004 held in Canberra.

Workshop M1: Sourcing Strategies: What are your options?

Andy Redwood Independent Consultant

In the current financial climate it is prudent to spend some money to save more money where possible.

Within testing services centres, it is common to attempt to plan, design, automate and execute your tests in the most efficient and effective way possible. At times this means using skilled, but cheaper external resources to undertake the effort.

Sourcing skilled testing staff from offshore can be a leap of faith. Many factors affect the changes of success. There are risks and cultural issues to overcome. Many have attempted to balance the onshore/offshore activity, some with great results whilst others have failed.

This workshop is based on research conducted last year to assess the Sourcing Market. Who supplies these people and services? Where are they based? What skills do they offer? How much support will be offered? At what cost and at what benefit? What ROI can be expected?

Attendees will have the opportunity to discuss and contrast some of the sourcing options, look at the top service providers and assess what cost benefit can be achieved and what risks and issues need to be addressed to maximise the potential returns.

Andy has presented many times at the BCS Sigist in London during the last 10 years or so.

Andy's is a senior testing practitioner managing small medium and global test teams to deliver pragmatic, strategic solutions and works all over the world for Financial Services companies great and small.

Andy also has a duty to integrate corporate test strategy, aligning with business objectives, strategic architecture, and life-cycle processes to deliver tangible benefits both onshore and offshore. Andy has lead teams that have saved over £30M in a year through removing diversity across departments and subsidiaries, inter-department process, commercial inefficiency and geographic or cultural differences, not just for testing activities, but for the greater corporate good.

Andy has a personal industry profile and is a regular public speaker at international conferences. He was Chair of the UK ISEB International standards Panel in 2003/4, the UK representative to the International Board in 2003. In 2004 he founded the ISEB UK Executive Committee at the request of David Clarke, the Chief Executive of the British Computer Society.

Andy was awarded the EuroSTAR Award for outstanding contribution to the Software Testing Industry in Europe, in December 2005, one of only ten people in the world to do so, following a previous nomination in 2003.

Workshop M2: Good Practice Does Not Ensure Success

Chris Comey Testing Solutions Group

You are no doubt aware of several activities labeled as good or best practice within the test community. These activities are typically acknowledged as being effective and efficient in achieving a specified test goal.

Specific good practices, however, often require certain conditions to exist or for 'other' supporting activities to also be performed in order to achieve the objective. If these 'other' activities are not performed then the overall benefit of the good practice is reduced and in some extreme conditions may actually have

negative impact, draining valuable time, resources and energy from the project.

During the workshop you will get to cast your vote – *for* or *against* on a set of recognized 'good practices' set in a specified scenario - but beware you may be called on to justify your decision and argue your case!

Come with an open mind and be prepared to join in – after all you have valuable experiences and views that can benefit others. Here is a **sample** of some of the discussion points:

Entry Criteria – a critical check or do they just block progress and we always wave them anyway?

Reviews – most of the stuff is meaningless, but I am required to complete it anyway

Formal test process means I don't take risks - and therefore I'm not accountable!

Is a **risk based approach** just an excuse to not test parts of the system?

Nice **test technique** but not applicable here!

We will also conduct a risk based testing exercise where you get to choose which order you will test release content for a series of releases. You will need to state why you chose this sequence (not as easy as it sounds). We will then analyse and compare results and discuss as a group. Again be prepared to justify your choices when challenged – oh dear, this is beginning to sound like work!

Chris Comey has over 27 years experience in IT, including finance/banking/settlements, telecommunications, insurance, electricity, gaming, and various websites.

Chris is a testing practitioner and over the last 10 years has delivered many testing training courses including Risk Based Testing and ISEB Practitioner. Chris has also performed roles including Test Manager and Consultant. Chris is presently the Test Stream Lead at a major European Financial Institution leading the testing of a European wide business critical project.

Workshop A1: Questioning Testing Myths: Critical Skills for Testers

Participants are encouraged to bring a Windows-based laptop computer to the workshop.

Michael Bolton, Developsense

- *Every test must have an expected, predicted result.*

- *Effective testing requires complete, clear, consistent, and unambiguous specifications.*
- *Bugs found earlier cost less to fix than bugs found later.*
- *Testers are the quality gatekeepers for a product.*
- *Repeated tests are fundamentally more valuable.*
- *You can't manage what you can't measure.*
- *Testing at boundary values is the best way to find bugs.*
- *Test documentation is needed to deflect legal liability.*
- *The more bugs testers find before release, the better the testing effort.*
- *Rigorous planning is essential for good testing.*
- *Exploratory testing is unstructured testing, and is therefore unreliable.*
- *Adopting best practices will guarantee that we do a good job of testing.*
- *Step by step instructions are necessary to make testing a repeatable process.*

If you're a tester or a test manager, you've probably heard statements like these touted as universal, unquestionable truths about testing. At best, these bits of mythology and folklore are heuristics—fallible methods for solving a problem or making a decision. At worst, they're potentially dangerous simplifications or outright fallacies that can threaten a tester's credibility, a product's value, or an organization's business.

Testers live in a world of enormous complexity, scarce information, and extraordinary time pressure. This workshop, presented by Michael Bolton, is designed to teach strategies and skills—questioning skills, critical thinking, context-driven thinking, general systems thinking—that can help testers deal confidently and thoughtfully with difficult testing situations.

In the workshop, we'll question the myths of software testing; examine common cognitive biases, and the critical thinking tools that can help to manage them; learn modeling and general systems approaches to manage complexity and observational challenges; and work through exercises that model difficult testing problems—and suggest approaches to solving them.

Key points:

- Heuristic approaches are the foundation of human decision-making, in disciplines from education to engineering.
- While technical skills are undoubtedly important, applying them successfully requires higher-order skills.
- Good testing is less about confirming, verifying, and validating, and more about

questioning, exploring, discovering, investigating, and learning.

- As the principles of the Context-Driven School of Software Testing assert, while there are good practices in context, there are no practices that are universally best.

Michael Bolton is a tester, consultant, and testing trainer and a leader in the context-driven software testing movement. He has over 20 years of experience in the computer industry testing, developing, managing, and writing about software. Currently, he leads DevelopSense, a Toronto-based consultancy. Prior to that, he was with Quarterdeck Corporation for eight years, during which he delivered the company's flagship products and directed project and testing teams both in-house and around the world.

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Michael lives in Toronto, Canada, with his wife and two children.

Michael can be reached at mb@developsense.com, or through his Web site, <http://www.developsense.com>.

AND FINALLY...

Please make a note of the dates of our conferences for 2009 as attendance is on the increase and so we'd really like you to book your place early to avoid disappointment.

Tuesday 22nd September

Keynote:

**"Growing Our Industry:
Cultivating Testing"**

Isabel Evans

Thursday 10th December

Keynote:

**To be announced shortly
(see the website)**

2010 Conference Dates

March: Looking for speakers

June: Looking for speakers

September: Looking for speakers

December: Looking for speakers

I'm keen to help people who have a good story to tell but are not professional speakers and so if you'd like any help in preparing an abstract or a talk please feel free to e-mail or call me directly

Please enjoy the conference talks and workshops and please remember to make the most of the networking sessions and the exhibition.

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THE TESTER

September 2009 Issue

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Tuesday 22 September 2009

Next Conference: Developing Testers

Keynote Presentations

- Growing Our Industry: Cultivating Testing
- Soft skills don't have to be hard

Track Sessions

- Scrum Implementation in Product Testing
- Models for Testing Business Process
- Hitchhiker's guide to the software testing galaxy
- Test data management – a best practice guide

Interactive Workshops

- Modeling test scenarios based on data
- Implementing the Test Maturity Model (TMMi)
- Using Data Objects to Create Effective Test Data
- Practical Application of the Test Process Improvement (TPI) Model



Please note that any views expressed in this Newsletter are not necessarily those of the BCS.

FROM THE EDITOR

Matt Archer, Editor

Welcome to the September edition of *The Tester*, which includes the publication of our SIGiST conference dates for 2010. Our continual aim is to deliver bigger and better SIGiST conferences. If you have any thoughts about what a bigger and better SIGiST would mean to you, feel free to contact myself or any of the other committee members to discuss your ideas.

My inbox has been buzzing the last few months with articles for this edition of *The Tester*. I hope you enjoy the selection. There is certainly a good mix. Our first article is by **Georgia Motoc**. Georgia provides a useful insight into how to test an application that supports multiple languages. What surprised me is that you don't need to be bilingual to perform this type of testing – well, at least not for some types of test. Read Georgia's article to find out why. **Rob Lambert** continues our lineup with an interesting article about how society's attitude to personal communication and collaboration are crossing over the workplace. Is this same shift helping support the rise of agile methods? Read Rob's article and decide for yourself.

Our third article is written by **Jennifer Lumley**. Jennifer's article makes an excellent resource for anybody considering changing jobs. Her knowledge of the recruitment process makes this article worth reading, even if you are not actively looking for a change in career.

Have you ever been told that you cannot use production data for testing? I know I have. Our final article offers a solution to this problem. **Huw Price** provides an excellent guide to scrambling, masking and obfuscating production data, which I'm sure you will find interesting.

If you are inspired by reading the 4 fantastic articles in this edition and would like to become a published author in *The Tester* yourself, then please email me.

I look forward to seeing you all at the conference in September. In the mean-time, happy testing!

Matt Archer

The Tester Editor
BCS Specialist Group in Software Testing
matt.archer@ivarjacobson.com

SIGIST CONFERENCE BOOKING INSTRUCTIONS

**If you would like to pay online,
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booking and payment system.**

www.bcs.org/events/registration

**If you would like to pay by
cheque, you can download a
booking form.**

www.bcs.org/upload/pdf/sigist-2009-booking.pdf

**If you have a query relating to
making a booking, please contact
Gemma Liddiard, Specialist
Groups' Officer.**

Tel: (01793) 417656

gemma.liddiard@hq.bcs.org.uk

WEBSITE LINKS

BCS SIGiST website:
www.SIGiST.org.uk

SIGiST Standards Working Party:
www.testingstandards.co.uk

SIGiST UML Testers Forum:
www.umltesters.org

BILINGUAL TESTING – WHERE DO THE BUGS CRAWL?

If you are bilingual it's worth applying for bilingual testing jobs. You don't have to be fluent to apply for bilingual testing jobs. Checking is visual and you must be good in spelling and grammar. The fact that you speak another language and are able to test applications written in this language makes you more marketable, plus you stand out from other candidates. In this article I'm giving the example of being bilingual in English and French, but you can take any other two languages that apply to you. Everything applies, except the accents maybe, which don't exist in every language.

What do you test in a bilingual application (French in this case)?

Open up the application in two browsers: one in English and one in French.

Do a first sift of the application: Match the two versions. Everything should be the same. Look at GUI elements and test functionality in every page. Trigger all possible error messages because they often remain untranslated.

Do the second sift: Read the text on every page, disclaimers, or terms and conditions forms. The bugs like it here. You will find some text untranslated. Grammar and spelling are usually pretty good because the forms are translated once and they're the same regardless from which page you access them. Check the accents. Check acronyms – for example CDIC in English translates as SADC in French.

Do a third sift: Applications in French are very good at crashing when you enter unaccepted symbols or funny characters in text boxes. Try entering letters with accents in text boxes and see what happens. I bet you will find more defects.



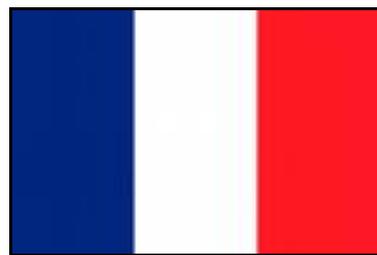
Figure 1: 'services publique' should be at plural - 'services publiques'

Where do the bugs crawl?

Errors are always in the same places.

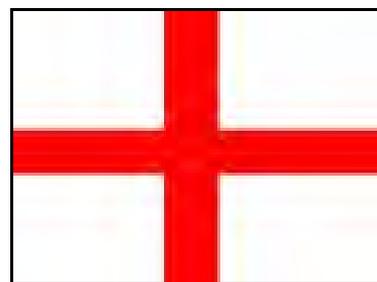
1. The English and French versions are not consistent:

- Text placement on the page, number of links, images, fonts, headers, and colors should be exactly the same.
- Functionality wise, the application in French must do exactly what the application in English does.



2. Text remains untranslated or it's missing:

- You might see English words on the French version.
- You might see sentences in English that translated in French don't mean the same thing.
- If the application is implemented in small modules, translation is not consistent from one module to another. For example, in one module FAQ shows up as "Foire aux questions" but in another module it remains as FAQ.



3. Grammar and spelling are not correct:

- You find verb-noun disagreements.
- Accents put on the wrong letters – 'accent aiguë' displayed instead of 'accent circonflexe'.

The value of a bilingual tester

The value of a bilingual tester stands in the little errors that he finds. Some testers say it's easy to test an application in another language and it is, IF you're just matching functionality English to French. But the difference lies in little details and spelling mistakes, incorrect grammar, and untranslated text should not be overlooked.



Georgia was born in Romania and immigrated to Canada in 2002. Shortly after landing she started to work as a junior bilingual tester at one of the major banks in downtown Toronto. She built on her experience over the last seven years by participating in challenging projects of various sizes, working with teams of business analysts and developers. She is testing in both English and French, specializing in financial applications.



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This year, the Software & Systems Quality Conference UK will take place on the **5th October 2009** at the **Guoman Tower Hotel in London.**

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The programme, now available online, includes the following topics:

**Test Management • Non Functional Testing • Test Methodology • Agile Testing •
Test Automation • Technical & Legal Due Diligence • Supplier Management •
Open Source in Action**



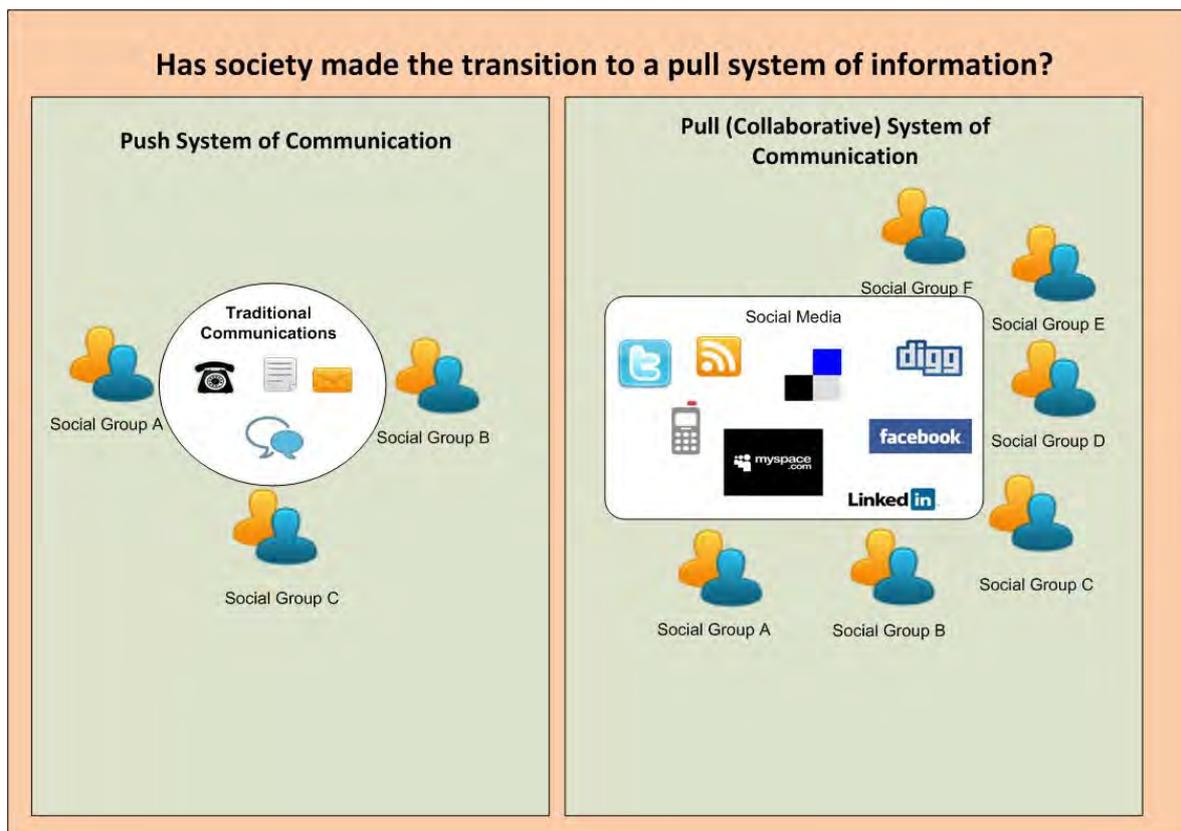
**For further information and to register, please go to www.sqs-conferences.com/uk
or call +44 203 326 5341**

COULD THE RISE IN SOCIAL MEDIA BE PAVING THE WAY FOR MAINSTREAM AGILE ADOPTION?

The rise in popularity of agile principles and methodologies is taking the software development world by storm. People are adopting agile in increased numbers and in sectors once considered too difficult to change. But could this popularity be linked to far reaching changes in society?

As communication and information sharing in society evolves are we making the same changes in the way we work? As social media and collaboration becomes more popular in society are we seeing the same principles being applied and accepted in software development?

Society is in the throes of a very real shift in communications. Our traditional system of push communication is slowly ebbing away and being replaced by a pull / on demand system. We dip in and out of communication and no longer only receive information at set times. It's evident in the take up of RSS, mobile phone internet usage, VoIP, TV recorders/Sky + and the multitude of social tools like facebook, Flickr, Delicious, MySpace and twitter. We now subscribe to blogs, instant chat with people all over the globe and access information we need on any wireless device at anytime and it's becoming second nature. It's becoming the norm, even for many people in society who are not involved in IT, marketing, advertising and other related technology industries.



As society evolves its model of communication it is inevitable that these same people will be bringing these principles to everyday business. And it's this very shift in society that could go some way to explaining why agile is becoming so popular. I believe there are three main reasons why this is happening:

1. Members of project team are adopting and embracing social media tools and collaboration. This naturally leads to increased exposure to agile information, events, chatter, advertising and marketing from a much wider audience.
2. The current economic climate is creating a competitive, yet fluctuating market where products are being released cheaply and quickly, often by highly motivated and dedicated teams. A perfect environment for agile and lean processes to flourish. As this market changes to meet economic and social demand it's natural to want to adopt a flexible and reactive approach to software development.
3. The next generation are entering the workforce and market and with it they are bringing a 'nothing is impossible' attitude. They are motivated, passionate and creative which is bringing about real change within companies and the market as a whole. Where once we may have spent months planning, designing and prototyping we are now seeing small and focussed teams delivering real, working and highly successful products in very short time scales. This is upsetting the balance. And these same workers are seeking out interesting, collaborative and fast moving projects within forward thinking and creative companies. Some are simply creating their own companies. So in order to remain relevant and attract the latest and greatest talent companies are having to evolve and change their ways of working and the environment they operate in.

As the digital native enter the workplace this move to a flexible, reactive, collaborative and creative working environment will only accelerate. As will the move in society to new social media concepts and tools. There are some very real success stories in the news about profits being made through advertising and customer engagement through social media tools. Large corporations are using these social networks to engage with their customers, promote their brand and keep a watchful eye on any negative news filtering through.

This change in mindset where regular engagement and information sharing is a priority is almost exactly what we see in the modern software development. Teams are now engaging with the customer regularly with demonstrations to customer where feedback is then forming the project direction. The customers are now empowered at regular intervals to change or confirm the direction of the project. This means that in fast changing markets the customer has the ability to remain relevant and get real value for money. But more importantly, they more often than not, get the product they need for the current market. Not the product they thought they needed months ago when the market was different.

And as testers, this environment can at times be chaotic and seem uncontrolled, but it also represents a great opportunity to be involved, to shape the direction of methodologies and the software testing industry, to work closely with our customers and to champion quality in an ever changing arena.

The world of social media is still in flux and will continue to move forward, evolve and dominate the headlines. As will the arguments over which methodology is best. But one thing is for sure, no matter which methodology we choose or which one is more relevant, it needs be able to cope with change, uncertainty, shifting requirements and a new creative and demanding workforce.

My money's still on agile.....Well, until the next big thing comes along anyway.

This article was written by **Rob Lambert**.

LIBRARY UPDATE

Hello there, as librarian for the SIGiST I would like to take this opportunity to tell you about a few new additions to the library bookshelves and to update you on our plans.

New Books

The first new addition to our expanding resource is "How we test software at Microsoft" by Alan Page, Ken Johnston and BJ Rollinson. This signed copy was donated by Bj after his interesting and informative presentation during the December '08 SIGiST conference and it was brilliantly reviewed by Sarah Salahuddin at the June meeting. Details of both presentations can be found on the SIGiST web site.

The second acquisition is "Fatal Defect - Chasing Killer Computer Bugs" by Ivars Peterson which was very generously donated by Dorothy Graham who is herself is an avid collector and reader of a wide range of materials and never fails to highlight an interesting and thought provoking resource. She had mentioned this book to me previously and I think I somewhat twisted her arm to get this copy into our library. Although published in 1995 its message is still valid today and I will include a more detailed review in a future addition of The Tester magazine.

The third book I would like to tell you about is a new purchase for the library and it came from a personal recommendation by Gitte Ottosen of Systematic Software, Denmark. She couldn't recommend it highly enough and said that a number of her team had already purchased their own copies! Look out for the full review of "Agile Testing – A Practical Guide for Testers and Agile Teams" by Lisa Crispin and Janet Gregory in the next edition of the Tester.

Update

Firstly, the library is expanding (as you can see from the generous donations mentioned above) and also what I will term 'refreshing' – not to say that the books and resources we already have aren't useful but as with every discipline we need to keep up with current and emerging practices. So look out for the new books update in future editions of The Tester. And of course if you have any recommendations please let me know at siglib@iotest.com.

It is also our intention to have a library area at each of the conferences. There will be a selection of the available books to peruse as well as details of the full library. Hopefully this will make it easier for you to select the resource you need and also to return any books previously borrowed. Again, feel free to stop by and pass on any recommendations you may have.

Sue Atkins, SIGiST Librarian



BORROWING A LIBRARY BOOK

Looking for a testing book but not sure which topics are covered? Or are you trying to decide which testing book to buy? Or do you simply want to increase your testing knowledge? If the answer to any of these questions is 'yes' then the SIGiST Library could help!

The SIGiST Library has lots of testing books covering a variety of topics and they are available to borrow for a period of 4 weeks - free of charge. Extended loans are allowed as long as the book has not been requested by another SIGiST member.

Topics include (amongst others) Requirements testing, Reviews/Inspections, Test Management, Test Techniques and Test Process Improvement.

If you would like to know more about the library and books available, or for any queries, please contact Sue Atkins on 01697 748 748 or email her at siglib@iotest.com. Happy Reading!

TESTING THE JOB MARKET

Most professionals working in the testing market will have had exposure to the recruitment process at some point in their careers. There are a number of different vehicles available when job seeking, however, working with recruitment companies still remains a key solution. In an industry which has changed and evolved almost beyond recognition over the past couple of decades our perspective on how recruitment companies work and how we can maximize our potential, needs to be kept up to date.

In order to put this article into context it may be useful to be aware that I have worked in IT recruitment for 17 years (I started when I was very young 😊). For the last 9 years I have been purely engaged in the Testing/QA market. I have ISEB Foundation certification in software testing, am an active member on the committee of SIGIST and have been part of and managed teams of recruitment people focused on this market. My team and I speak to hundreds of companies about their approach to QA and have recruited over 400 people for our clients into both contract and permanent positions.

Some companies decide to recruit new employees directly however the majority still recognize the value of engaging with recruitment partners in order to save their own time and the cost of advertising online which can be pricey, and not forgetting the enormous amount of energy draining abortive activity we in recruitment go through to find good candidates..

As we would all assume, given the economic environment, the volume of people applying for work has increased substantially.

To give an example when advertising for a contract tester with fairly specific telecoms experience recently:

- Over 230 people applied within 2 hours
- Time spent going through responses works out at about 5 minutes per application
- To go through 230 people takes nearly 20 hours.

Clearly, the cost can be massive, wherever possible a specialist agency is more likely to work from their own qualified database of candidates with whom they have relationships before spending time and money going to the open market. If there is a need to advertise then as you can see it is a costly affair in both time and money and this process is before the Account Manager or resourcer even starts telephoning and screening candidates which can take up to 20 minutes per individual. Whilst going through this process the Account Manager needs to also be very aware of timescales, often having to respond quickly to urgent needs so getting to the most appropriate people quickly is essential.

On the face of it this news must be concerning for anyone seeking work however when we look at the response in detail things are not so bleak for professional candidates. It still amazes me after 17 years of working in the industry what a small percentage of people actually represent themselves effectively when looking for work, there are a few points which will have a direct effect on how your interest in a role is managed, they may seem obvious however as I mentioned only a small number of people actually take the time to ensure they are maximizing their chances:

- **Take time to differentiate yourself from the pack** – in your email, in addition to attaching your CV responding to the role, you should bullet point how your experience matches the requirement and you should quantify the areas that you can eg. LoadRunner – 4 years experience last used June 2009. This approach will ensure you are perceived as being professional and proactive.

- **Explain gaps in your CV** – the days when any gaps in employment are perceived as being very negative are coming to an end with most employers understanding the fluidity of the working environment however if there are unexplained gaps or ambiguity around project duration in your CV it is more possible that your application will be passed over because you are either hiding something or just because the person screening CV's will not have the time to spend calling everyone up who does not have a complete history in order to get an understanding of the circumstances.
- **Grammar** – your CV is probably the most important document you will ever produce, ensure the grammar and layout are perfect. This probably sounds incredibly obvious however over 60% of CV's we receive are not pursued because there are grammatical and spelling errors – for a testing professional to have a less than pristine CV for these reasons is like shooting yourself in the foot when the very industry you work in depends on an 'eye for detail'.
- **Talk about your role in projects** – It is Important to give a brief overview of the company and projects you have worked on throughout your CV however it is also essential to give specific information about your part in the project (role, duties, responsibilities and achievements), give an indication of team sizes where possible.

In addition to the above observations there are a few things you will need to consider when searching for a new role: -

- Make sure you are comfortable the agent is suitably skilled to represent you.
- Be as accessible and reliable as possible – for instance nothing is more aggravating than finding the candidate you need to get hold of has forgotten to recharge their phone battery.
- Be clear about your motivation and goals.
- Be transparent on dates and availability.
- Make sure your CV is up to date and comprehensive.
- Do you know what type of role you are looking for, agents with specialist knowledge will be able to offer alternative ideas and roles to consider and discuss career options.
- Geographic parameters.
- Salary/rate requirements.

Discussing these details with your agent will increase your search potential and help them secure a specific role suited to your skills and experience, a good quality recruitment consultant will be keen to develop long term relationships with job seekers and clients.

An agent's reputation in part comes from the caliber of people they shortlist for jobs so if as a candidate you prove to be professional, reliable and honest you can be fairly certain that the agent will go out of their way to put you in front of their clients time and again, my personal experience demonstrates this having placed the same person (on contract) with up to 4 clients consecutively.

In past years it was perceived to be more important for job seekers to develop a relationship with agents however with the advent of job boards many assume this is not so key. I still believe that "people do business with people" and as a job seeker it is important to find a handful of agents who you believe are professional, genuine and knowledgeable about their market, any one agent will not humanly be able to have a relationship with every potential employer in the country (and maybe overseas) however if they have a niche market and

have worked in their sector successfully for some time then you should recognize value in having a positive relationship with them.

Information which you may find valuable from a professional and credible recruiter:

- Market trends in QA/Testing – what are companies interested in i.e. tools, processes, methodologies
- What is happening to salaries/budgets
- What is the competition like – how many people are looking for work
- Skills shortages – are there any skills which are currently hard to find – maybe you could cross train
- Which job boards are popular at the moment

Search for specific job boards relating to Testing & QA and keep your profile current. Recruiters search these daily for new profiles to match their criteria; most recruiters will be using Monster / Jobserve / Jobsite. Personally in addition to keeping track of where my CV has been sent I would be reticent to have my profile submitted for any role I did not have a detailed specification for or at least an email explaining the key aspects of the job, I would also want an understanding of the salary/rate I was submitted at. These two details are what Recruitment firms should be providing as part of the Conduct of Employment Agencies and Employment Business Regulations Act 2003 and subsequent amendments.

Jennifer Lumley is Head of E-Assurance, a specialist recruiter for the Testing & QA arena, with an average experience of over 10 years. Jennifer can be contacted at Jennifer.lumley@e-assurance.co.uk or E-Assurance, A division of E-Resourcing Ltd, Adelphi Court, 1-3 East Street, Epsom, Surrey, KT17 1BB. Tel: 01372 748444

CONFERENCE PROGRAMME

22nd SEPTEMBER 2009

DEVELOPING TESTERS

Stephen Allott, Programme Secretary

I'd like to extend a very warm welcome to all testers, developers, project managers and anyone who's not enjoyed a particularly warm summer this year. Never mind, things will soon start to heat up as we debate the coolest topics under the sun at the autumn conference.

Our theme for September is Developing Testers and was chosen based around **Isabel Evans'** excellent keynote from EuroSTAR "Growing our industry – cultivating testing" which will no doubt inspire us all once again.

As many of you know I have long argued that testers must develop not only their technical skills but also their softer, people skills so that they can communicate effectively to their managers and peers. **Fiona Charles** from Canada will give you insights into both aspects in her workshop "modeling test scenarios based on data" and her closing keynote speech "soft skills don't have to be hard".

Something that is quite hard is Using Data Objects to Create Effective Test Data and I'd highly recommend **Huw Price's** workshop if getting the right kind of test data is an issue for your organisation.

Feedback from the delegates at previous conferences suggest that Agile methodologies are always popular topics and so we have invited **Suman Kumar Kanth** to tell us about his practical experiences when implementing SCRUM. On another practical note, we are also delighted to welcome Brian Buege to explain models for testing business processes based on his experiences at BT.

I am sure you will enjoy the dry humour from experienced test manager **Graham Thomas** as he takes us through the Hitch Hikers Guide to the Software Testing Galaxy. I'll leave it to **George Wilson** to bring us back down to Earth with Test Data Management – a best practice guide.

For our share point session, for new and upcoming speakers we are delighted that **Rosie Sherry** will tell us a little bit about the software testing club.

Please book early, especially if you want to attend a workshop – these workshops are designed for your participation and places are limited so please register now online at www.sigist.co.uk. Please note the workshops run alongside the main talks so you cannot attend both – why not bring along a colleague or two, attend all the sessions as a team and swap notes later.

Finally, I'd like to personally recommend you take a look at the one-day SQC testing conference to be held in London on 5th October. Although I am not involved this year, I've presented at SQC in the past in London and Germany and I have helped to develop and shape this conference over the years. Why not book today. You should have a great experience.

We're always on the lookout for new speakers so please download our call for papers from the website and follow the instructions to submit your ideas for a talk or a workshop.

And Finally

Some dates for your diary . . .

Please make a note of the dates of our forthcoming conferences as attendance is on the increase and so we'd really like you to book your place early to avoid disappointment.

Upcoming Conference Dates
Thursday 10 th December 2009 – Keynote Speaker Tom Gilb
Thursday 11 th March 2010
Tuesday 22 nd June 2010
Thursday 16 th September 2010
Wednesday 8 th December 2010

Please enjoy the conference talks and workshops and please remember to make the most of the networking sessions and the exhibition.

I am keen to help people who have a good story to tell but are not professional speakers and so if you'd like any help in preparing an abstract or a talk please feel free to e-mail or call me directly

Stephen Allott
Programme Secretary
BCS Specialist Group in Software Testing
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SEPTEMBER 2009 CONFERENCE PROGRAMME

BCS SIGiST – Developing Testers

Tuesday 22nd September 2009

Royal College of Obstetricians and Gynaecologists

27 Sussex Place, Regent's Park, London NW1

08:30	Coffee & Registration, Tools & Services Exhibition opens		
09:15	<p align="center">Introduction and Welcome Geoff Thomson, SIGiST Treasurer and Vice Chair Person</p>		
	<p align="center">Opening Keynote</p>		
09:30	<p align="center">Growing Our Industry: Cultivating Testing Isabel Evans, Testing Solutions Group, UK</p>		
10:30	<p align="center">Networking session and commercial break</p>		
10:45	<p align="center">Tea/coffee break Opportunity to visit the Tools & Services Exhibition Browse a selection of testing books from the SIGiST Library</p>		
11:15	<p align="center">Scrum Implementation in Product Testing: A Practical Approach Suman Kumar Kanth Infosys</p>	<p align="center">Workshop M1 Modelling test scenarios based on data Fiona Charles Quality Intelligence</p>	<p align="center">Workshop M2 Implementing the Test Maturity Model (TMMi) Geoff Thomson Experimentus</p>
12:00	<p align="center">Models for Testing Business Process Brian Buege BT</p>		
12:45	<p align="center">Lunch break Opportunity to visit the Tools & Services Exhibition Browse a selection of testing books from the SIGiST Library</p>		
14:00	<p align="center">Hitchhiker's guide to the software testing galaxy Graham Thomas Independent</p>	<p align="center">Workshop A1 Using Data Objects to Create Effective Test Data Huw Price GRID-Tools Ltd</p>	<p align="center">Workshop A2 Practical Application of the Test Process Improvement (TPI) Model Stephen Allott ElectroMind</p>
14:45	<p align="center">Test data management – a best practice guide George Willson Original Software</p>		
15:30	<p align="center">Tea/coffee break Opportunity to visit the Tools & Services Exhibition Browse a selection of testing books from the SIGiST Library</p>		
16:00	<p align="center">Sharepoint: Rosie Sherry, Software Testing Club</p>		
	<p align="center">Afternoon Keynote</p>		
16:15	<p align="center">Soft skills don't have to be hard Fiona Charles, Quality Intelligence</p>		
17:00	<p align="center">Closing Remarks</p>		

The SIGiST committee reserves the right to amend the programme if circumstances deem it necessary
Workshops will have limited places, to avoid disappointment try to book in advance.

Opening Keynote: Growing Our Industry: Cultivating Testing

Isabel Evans

Testing Solutions Group, UK

Although software testing is a relatively young discipline, immaturity is not the only reason we are still developing our methods, professional qualifications, trade associations, and position in the software industry and society. All successful professions must continuously evolve and grow. Membership of a profession provides an expectation of behaviour, qualification and experience, regulated by a professional body. We need to understand whether it is desirable or possible to be a profession, and how we should regulate ourselves for the benefit of our customers, the industry and practitioners.

Software testing is not the only trade or industry to be working through what is meant by being a profession; the horticulture industry is going through a similar discussion of whether profession status is desirable, achievable or necessary. Horticulture has been practiced for about 8,000 years longer than software testing. During those millennia, horticultural practices have continued to develop, supported by accidental discovery, increased scientific understanding, and improved technology. Just like horticulture, software testing is a multi-discipline, science- and technology-driven industry with political, sociological, and economic implications.

Both horticulturalists and software testers need to consider:

- How regulation has been used in other trades and industries as they developed into professions
- The role of professional bodies in controlling and regulating professionals
- The role of standards, qualifications and bodies of knowledge in controlling and regulating entrance and practice levels for professions and trades
- The role of monitoring and regulation in maintaining standards of behaviour and practice.

A principal consultant at Testing Solutions Group, Isabel Evans has more than twenty years of experience in the IT industry, working in quality management, testing, training, and documentation in the financial, communications, and software sectors. The author of Achieving Software Quality Through Teamwork, Isabel has spoken on software quality, testing, and test management at conferences worldwide. Isabel is a Chartered IT Professional and a Fellow of the British Computer Society.

Scrum Implementation in Product Testing : A Practical Approach

Suman Kumar Kanth, Infosys

Adopting Agile methodology for Software Testing in Scrum way has got lots of challenges. There have been more failures than successes. As part of Leading Scrum initiative for Testing as Director QA in a Product company I had ample exposure in running through various challenges.

The challenges were multifarious from governance to tracking to implementing the whole concept. There were failures and there were successes. We learnt from mistakes and then learnt the way to succeed.

This presentation is a reflection of how it was practically implemented in a Product Testing Environment, what were the lessons learnt and what are the recommendations which can be taken forward.

The FOCUS of the whole presentation would be to let the audience know what has really worked. Testing is the most affected area in Scrum environment and needs a total transformation from changing the mindset to getting into the lifecycle model, it is imperative that due diligence is observed before jumping into the race for Agile.

Also we need to take care of the measurements to track and benchmark the activities which will become base for the next generation of implementation. An oversight will also be provided for the same.

Overall the storyline will cover the following areas:

- 1) Why Scrum in testing?
- 2) Brief on Scrum
- 3) What we did?
- 4) Best Practices
- 5) Metrics adopted
- 6) Learning and Recommendations

Suman Kumar Kanth has got diverse experience of 16 years in industries like Steel Manufacturing, Publishing Products and IT Services playing the roles of Consultant, Account Manager, Quality Manager and Director QA.

Currently working as Group Test Manager looking after Testing activities of multiple Insurance customers from USA, Australia and Canada, for Infosys Technologies Limited which is a world renowned IT Services company having HQ in Bangalore, India.

Models for Testing Business Process

(Tools and Techniques to Verify Converged Human/Technical Systems)

Brian Buege, BT

As automation becomes an integral (perhaps ubiquitous) part of modern business, many experts are rightly focused on driving higher degrees of rigour into technical verification activities. However, sometimes the point is lost that although business processes are dependent on technology for their success, conversely, those very systems are often just as dependent on supporting business processes to deliver the proper customer experience.

In many cases, the business processes surrounding a deployment are tested as an afterthought, without the same rigour, techniques, or discipline applied to the technology itself. This gap in verification can lead to significant risk and often miss defects that are at the core of major in-life failures. This presentation will address tools, techniques, and models used to integrate process testing with technology testing in a "unified test activity." Furthermore, challenges accompanying implementation and areas requiring further research will be discussed.

Brian Buege is the Head of Testing for BT Openreach and BT Group. Brian joined BT in 2007 after serving in the capacity of CIO at the Missouri University of Science and Technology (USA). Throughout his career, he has held a wide variety of technical leadership positions such as: head of information systems security for a major airline, independent consultant specializing in the design and deployment of large-scale, converged, enterprise technology architectures, and director of network and computing operations for a large university. He holds a Master of Science degree in Computer Science and has work-related or implementation experience in the Telecommunications, Financial Services, Transport, Healthcare, Defence, and Education sectors.

A Hitchhiker's guide to the software testing galaxy

Graham Thomas, Independent

As Douglas Adams wrote in his book *The Hitchhiker's Guide to the Galaxy*, "Space is big. Really big. You just won't believe how mind-bogglingly big it is."

Well, the galaxy of software testing isn't quite that big, but it is large, getting larger, and can be very confusing to begin with. So how do we navigate safely through the software testing galaxy and keep up with its expansion?

This presentation will take the audience through the software testing galaxy, in the style of the Guide, describing the major testing constellations of; methods, skills, processes, tools, and measurement and giving advice on best practice for each. This will be presented as a 3D mind-map visualisation, an exciting way to view and zoom into mind-maps.

The book was written from the original radio series in the late 1970's, became a television series, and recently a Hollywood blockbuster film. The plot was interspersed, in a funny way, with Douglas Adams's experiences of Computing and Management methodology of the time. He was quite visionary, in that the Guide was a brilliant prediction of how useful internet search engines and mobile computing would become, and with the new range of lightweight and powerful mobile devices, combined with Google and Wikipedia we are fast approaching his vision. These insights have never been more relevant, current, and useful than in today's fast changing world.

He was also very observant, and this presentation will draw out some very useful and humorous behavioural analogies for software testing, including; towels, Vogon poetry, digital watches and more, using video clips as powerful illustrations.

Graham Thomas wrote his first computer program at college in 1978, started working in IT in the early 1980s as a programmer, and discovered software testing in the early 1990s. He has formal qualifications in programming, analysis and design, project management, and software testing. He has worked for a large consultancy, several smaller management consultancies, and also a systems house, as well as various end users. He has a wide ranging experience of IT, development and software testing, covering the public sector, retail, finance, banking insurance, and treasury. Currently he works as either a program test manager or implementing testing change. Prior to this he worked as a test manager.

George Wilson, Original Software

This best practice presentation explores data strategies and techniques which have been used to improve both test efficiency and software quality for applications based on Oracle and other Databases, utilizing methods to create, manage and validate test databases.

The profile and significance of Software Quality has increased through commercial and compliance pressures driving the need for IT teams to simultaneously reduce risk and delivery timescales. A basic building block of a coherent strategy for Software Quality is appropriate and accurate test data. This presentation explores the key principals and techniques as they relate to based test environments, and in particular Oracle) for targeted data extraction, data de-sensitization, use of pair-wise optimized input scenarios, data synchronization with test scenarios, as well as simultaneous user interface and database validation.

George is General Manager and has responsibility for sales, consulting services and product support delivery, to Original Software's worldwide client base. An engineer by training, his background served him to great effect at Osprey Computer Services (to 1995) where, as a main board director, he drove development and marketing of new applications into new markets for the company.

Later, as Business Group Manager and Quality Manager at AIG Computer Services, George rapidly broadened his platform experience, simultaneously managing IBM Midrange, NT and PC development projects - in a rigorous ISO9001 and TickIT management environment, where George's natural 'quality evangelism' served him well.

Afternoon Keynote: Soft skills don't have to be hard

Fiona Charles, Quality Intelligence

The toolbox of the truly great tester includes excellent skills in teamwork and communication, especially on an Agile project, where skillful collaboration is essential. You can learn the basic principles and grow the skills you need right on the job, doing the things you always do—but differently.

As a tester you are a project anomaly. A project's end product is a working software system, which

most of the project team members are devoting all their efforts to building, probably in a challenging timeframe. Then you come along and expose the flaws.

Your job—and secret delight—is to break the software everyone else is doing their best to create. If you test well, you will likely find many bugs which will take time to fix and retest. By communicating those bugs, you provide valuable information, but your work could make programmers feel exposed and defensive. If they start seeing you as an obstacle, you can't be an effective team member, however good your testing skills.

This session focuses on difficult project situations testers will find familiar, and describes some practical techniques for developing, improving and practicing teamwork and communication (writing, speaking and listening) skills in your daily work.

Fiona Charles is a Toronto-based test project manager and consultant. With 30 years experience in software development and integration projects, she has managed and consulted on testing on many projects, working with clients in diverse business domains to design and implement pragmatic testing and test management practices for their unique business challenges.

Fiona co-founded (with Michael Bolton) Toronto Workshop on Software Testing. She writes for StickyMinds.com and Better Software, and edited The Gift of Time.

Workshop M1: Modeling test scenarios based on data

Fiona Charles, Quality Intelligence

Many test efforts depend on scenarios that represent real sequences of transactions and events. Scenarios are important tools for finding problems that matter to stakeholders in business applications and integrated solutions. Often, they are essential for business acceptance, because they encapsulate test ideas in a format that is meaningful for business users and easy for them to understand and review.

User stories, use cases, and other business requirements can be good sources of scenario test ideas. But testers know that these are rarely comprehensive or detailed enough to encompass a thorough test without additional analysis. And if we base our test model entirely on the same

sources used by the programmers, our test will reflect the assumptions they made building the system. There is a risk that we will miss bugs that arise from misinterpreted or incomplete requirements or user stories.

One way to mitigate this risk is to build a test model whose foundation is a conceptual framework based on the data flows. We can then build scenarios by doing structured analysis of the data. This method helps to ensure adequate coverage and testing rigour, and it provides a cross-check for our other test ideas. Because it employs a structure, it also facilitates building scenarios up from reusable components.

In this session, Fiona Charles describes a conceptual framework for modeling a scenario test and designing structured scenarios, based on the data, for a transactional system. The presentation uses a real-life project example, showing how Fiona's test team applied the framework to design a test that found hundreds of bugs in a Point-Of-Sale system—after the vendor had completed their own testing and delivered the system for acceptance.

Fiona Charles is a Toronto-based test project manager and consultant. With 30 years experience in software development and integration projects, she has managed and consulted on testing on many projects, working with clients in diverse business domains to design and implement pragmatic testing and test management practices for their unique business challenges.

Fiona co-founded (with Michael Bolton) Toronto Workshop on Software Testing. She writes for *StickyMinds.com* and *Better Software*, and edited *The Gift of Time*.

Workshop M2: Implementing the Test Maturity Model (TMMi)

Geoff Thomson, Experimentus

Geoff is a member of the TMMi (Test Maturity Model integrated) Foundation. He has practical experience in implementing the TMMi model and helping organisations improve the way they test, and the added value this can generate. This workshop will present these experiences and benefits with the aim of helping the attendees to justify a test process improvement project.

As well as learning more about the five levels of TMMi during the workshop each attendee will be able, using the practical materials provided, to do

an evaluation of their own companies Test Maturity level.

Geoff will also present the results of a recent TMMi compliance survey.

The workshop will be fun but with a serious focus on understanding and implementing TMMi.

Geoff is the Consultancy Director of Experimentus, an IT services company that provides organisations with software quality management expertise.

He is a founder member of the TMMi Foundation, and is Vice Chairperson for the SIGIST.

He is also a founder member of the International Software Testing Qualification Board (ISTQB), is currently the Chairman of The UK Testing Board and the UK ISTQB representative. He co-authored the BCS book *Software Testing - An ISEB foundation*.

In 2008 Geoff won the European Testing Excellence Award.

He is a popular speaker having recently delivered keynote presentations in India and Australia as well as being a regular speaker at EuroSTAR and the BCS SIGIST.

Workshop A1: Using Data Objects to Create Effective Test Data (An insight into data generation techniques whilst maintaining maximum code coverage)

Huw Price, Grid-Tools Ltd

Huw price will offer advice on test data management techniques including how to create rich test data for the Healthcare, Commercial and Banking industries, including XML database and flat files. The tutorial/workshop will demonstrate how to use All Paired combinations, data inheritance, and data explosion to build rich sets of test data to maximize functional coverage. Huw will explain exactly how to use these strategies. Attendees should be able to take these strategies back to their organizations and implement them in future testing projects. Attendees will be expected to get involved and actually create the data themselves using the software and using the methodologies explained.

Implementing these philosophies (end-to-end integrated approaches to maximizing code coverage during testing) can help build more accurate and efficient testing. This will be demonstrated to the attendees, who will be able to build rich, quality test data hands-on during the tutorial. They will be able to take the

philosophies and hands-on experiences back to their organizations.

*With nearly a 30 year career, **Huw Price** has been the lead technical architect for several US and European software companies. Specializing in test automation tools, he has launched numerous innovative products which have re-cast the testing model used in the software industry. As well as building new products, he has become a serial entrepreneur building-up three software companies and selling their technology to larger, less agile competitors.*

Huw has provided high-level architecture design support to multinational banks, major utility vendors and health care providers. A strong believer in balancing pragmatism with a visionary approach, he has been able to rapidly bring new products to market while maintaining strong quality control.

Huw's newest venture, Grid-Tools, has quickly redefined how large organizations need to approach their testing strategy. Voted "Most Innovative Testing Tool of 2008" by QA Guild, Grid-Tools has introduced a strong data-centric approach to testing, launching new concepts such as "Data Objects", "Data Inheritance" and "A Central Test Data Warehouse." Currently working with leading edge testing companies such as Fiorano, Facilita, AQA and Emprix, Grid-Tools is building on the strategy of improving automation tools and associated structured methodologies.

Workshop A2: Practical Application of the Test Process Improvement (TPI) Model

Stephen Allott, ElectroMind

This workshop is designed for testing professionals who would like to learn how to apply the TPI® (test process improvement®) model in their own organization. The TPI model is a well known method published in 1999 by Tim Koomen & Martin Pol and identifies 20 key areas of the testing process that need to be considered for potential improvement. It offers a stepwise and structured approach to improvement of the testing process so that small, gradual changes are made which have a positive and measurable impact and are within budgetary and resource constraints.

The workshop is based on practical experience of using the model within the UK and Europe over the past few years. An overview of the model will be presented and this will be followed by interactive discussion and practical exercises based on the participants particular testing problems. Familiarity with the model would be

useful however not essential. To gain maximum benefit from this workshop, participants should have a good grasp of software testing terminology, methods, techniques and processes.

Finally, participants will be encouraged to provide input and ideas which may be able to shape the TPI model for the future; so please join in if you think you can help improve the improvement model.

Key points

- Learn the 20 key areas within the testing process as defined in the TPI model
- Improvement in one key area is dependent on improving other areas first
- Make a quick baseline assessment of your own testing process
- Understand how to apply the TPI model, get buy-in and overcome resistance
- Where to invest time & money in improvements that give a real payback
- Provide input to help improve the model

Stephen Allott has over 30 years experience in IT and an impressive track record of delivering successful solutions. He's worked for software suppliers, end user organisations and is currently Principal Consultant of ElectroMind, a consulting company he founded in 2002.

Stephen's experience spans the financial services, telecommunications, travel, and education sectors. He is an enthusiastic, pragmatic, IT professional, focused on helping companies deliver high quality software on-time, on-budget and, most importantly, software that meets the current needs of the business.

Stephen was a guest contributor to Fewster & Graham's book on Test Automation and reviewed and wrote a forward for Koomen & Pol's book on Test Process Improvement (TPI®) both published by Addison-Wesley. He recently wrote a chapter for John Watkins new book on Agile Testing.

Stephen is an advisor to Specialisterne, a Danish IT company that employs people with Autism who are planning to start up in the UK next year. He was elected a Fellow of the British Computer Society in March of 2009.

(TPI and Test Process Improvement are now registered trademarks of Sogeti.)

2009 TESTING CALENDAR

There are many testing events throughout the year, not all of them run by the BCS.

If you would like your event added to this calendar, email me at matt.archer@ivarjacobson.com

January 2009						
M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

29th: UK Testers Forum - Annual Summit London (<http://uktmf.com>)

February 2009						
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12th: Pub Exploration of Software Testing Bristol (<http://pest-global.org>)

March 2009						
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30	31					

4th: Software & Systems Quality Conf. Dublin (www.sqs-conferences.com)

17th: SIGiST Conference London (www.sigist.org.uk)

19th: TCL presents Dr James A. Whittaker Exeter University (www.tcl-global.com)

April 2009						
M	T	W	T	F	S	S
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27	28	29	30			

29th: UK Testers Forum London (<http://uktmf.com>)

30th: Pub Exploration of Software Testing Bristol (<http://pest-global.org>)

May 2009						
M	T	W	T	F	S	S
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14th: Pub Exploration of Software Testing London (<http://pest-global.org>)

20 - 21st: Next Generation Test Conference London

June 2009						
M	T	W	T	F	S	S
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15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

17th: SIGiST Conference London (www.sigist.org.uk)

25th: Pub Exploration of Software Testing Leeds (<http://pest-global.org>)

July 2009						
M	T	W	T	F	S	S
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16th: Pub Exploration of Software Testing Bristol (<http://pest-global.org>)

29th: UK Testers Forum London (<http://uktmf.com>)

August 2009						
M	T	W	T	F	S	S
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31						

13th: Pub Exploration of Software Testing Leeds (<http://pest-global.org>)

September 2009						
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17th: Pub Exploration of Software Testing London (<http://pest-global.org>)

22nd: SIGiST Conference London (www.sigist.org.uk)

October 2009						
M	T	W	T	F	S	S
			1	2	3	4
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15th: Pub Exploration of Software Testing Bristol (<http://pest-global.org>)

28th: UK Testers Forum London (<http://uktmf.com>)

5th: SQC 2009 London, www.sqs-conferences.com/uk

November 2009						
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12th: Pub Exploration of Software Testing Leeds (<http://pest-global.org>)

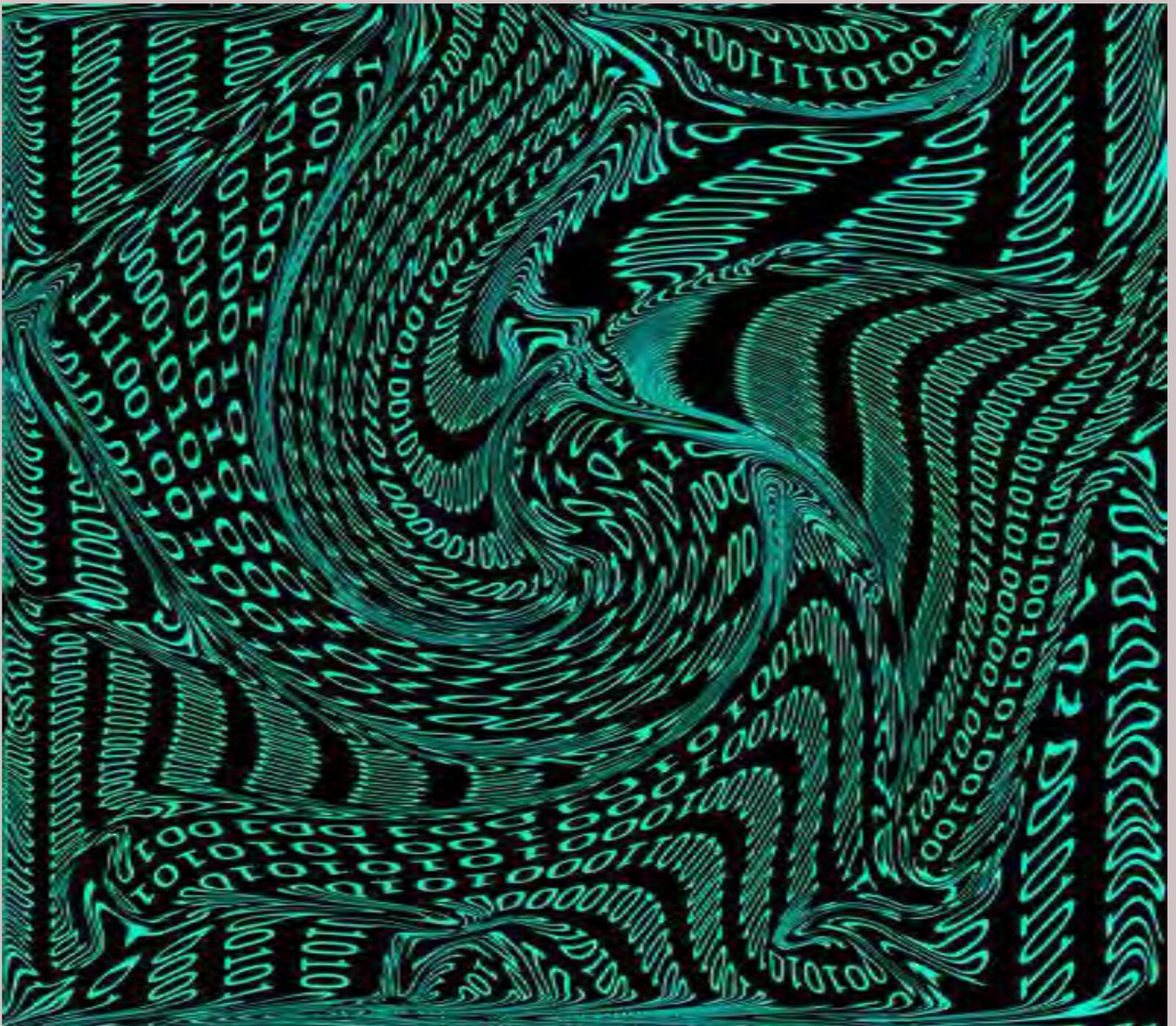
30th - 3rd Dec: EuroSTAR Conference Stockholm (www.qualtechconferences.com)

December 2009						
M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
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21	22	23	24	25	26	27
28	29	30	31			

3rd: Pub Exploration of Software Testing London (<http://pest-global.org>)

10th: SIGiST Conference London (www.sigist.org.uk)

A short guide to Scrambling, Masking and Obfuscating Production Data



By Huw Price

Introduction

Using production data in development and testing is nowadays becoming more and more unacceptable. Increased legislation, company fines, highly embarrassing data loss and data theft are forcing all companies to take a look at how they use production data for development and testing. In addition, the increased use of offshore, near shore and virtual images opens up all sorts of problems for securing your data from prying eyes.

A major technical area of interest to all IT departments is the question of what data to use in development, testing and offshore. Currently most companies use copies of production data. This has obvious security issues but also has several disadvantages familiar to all CIOs:

- **Copied data is usually out of date by the time it is used for testing, making time specific tests irrelevant.**
- **New functionality will not have any pertinent data.**
- **Multiple users will set up specific test scenarios which will be destroyed every time production is re-copied to testing.**
- **Large copies of production data on less powerful testing hardware make queries and searches run slowly and take up lots of expensive disk.**

In addition to full sized copies, most companies will have additional approaches to building testing environments, these include:

- **A small development database in which users create data by hand, this usually contains a large amount of invalid data.**
- **Extract a subset of production data for use in development using tools such as GT Subset.**
- **Using capture playback tools such as QTP, Forecast Studio, etc to populate transactions using the online applications.**
- **Using data generation tools such as Datamaker to build accurate test data.**

At some stage during the development and testing lifecycle, users will access production data. This paper outlines some of the simpler techniques to obfuscate or mask the data whereby:

- **You cannot identify an original customer, account or secure entity from the masked data.**
- **Overall data trends cannot be easily identified.**



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Where to Scramble?

The first consideration when designing a scrambling architecture is, where do you want to physically scramble the data? Is it good enough to copy production, move it into development run a few scripts and off you go? In my opinion, I would suggest this is “not really good enough”. Legislation in the area of data privacy refers to “best efforts” and I would put this in the “doing as little as possible” category. There are a few specific problems with this approach:

- **The live data lives in a development environment for a while unscrambled.**
- **The scripts to scramble the data tend to get forgotten, are not kept updated and tend to be built by a single DBA who may move on.**
- **There is no traceability.**

Better and more systematic approaches to data scrambling will depend upon your specific infrastructure. Many sites, for example, will already have copies of production data for use as reporting databases or for access by data warehousing toolset. These copy databases are protected by security layers and access control. The reporting databases can then be used as a source for scrambling extracts without impacting on production performance.

The main secure methods of scrambling are:

- **Extract the data through scrambling functions either on a live copy of production or preferably a reporting copy.**
- **Build a set of views that use scrambling functions to mask the data. Data will be extracted through these views. The access to these views can be granted using normal database security. As an indicator the initial data retrieval through the views is usually 5 to 10 times slower than against a native table.**

Create a secure environment and take a copy of production data, update the data in situ and when complete copy this to development. The same functions outlined in this paper can be used in update scripts to scramble the data in situ.



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Ad Hoc or Systematic?

As mentioned earlier, it is very easy to decide to write a few scripts to change a few customer names or alter a few characters of an account id. There are obviously a few problems with this approach which include:

- **They tend to fall outside normal programming control and are written in SQL scripts and non standard languages such as PERL. These scripts may well be perfect but tend not to be documented, not incorporated in source control systems and are not subject to testing by the test department.**
- **Database structures tend to change regularly and the scrambling functionality needs to be upgraded with each release. After a while the scrambling routines tend to be forgotten.**

In an attempt to be more systematic, the use of tools can be helpful as well as turning the scrambling task into a normal IT project. The scrambling project would be subject to the infrastructure, testing and control used in your normal development lifecycle. The benefits of this are:

- **Traceability – extremely important if data loss occurs.**
- **The scrambling tends to be more thorough and more useful to testing teams.**
- **Scrambling for new releases of software is automatically upgraded as part of the normal life cycle.**

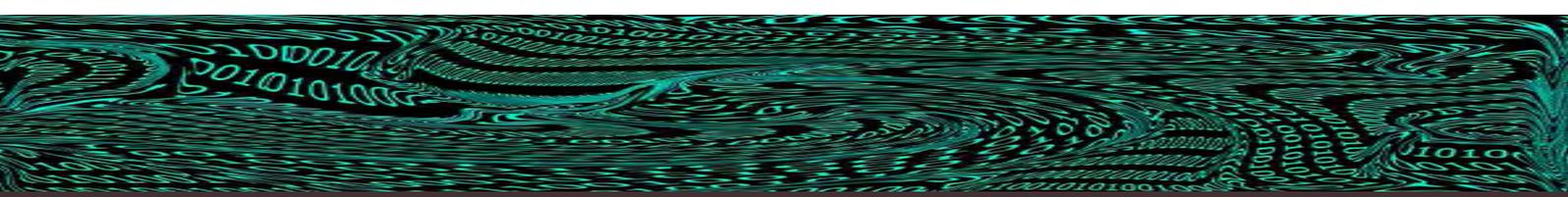
Know your data

Before beginning a scrambling project you will need to spend time understanding your data. A request from management may be as simple as “make sure no one can recognize a customer”, however, understanding what a customer consists of is the first task before you can begin scrambling. To begin building up a picture you will need to gather all of the available “free” information surrounding the data to be scrambled, this includes:

- **Foreign Keys. How are tables related in the database?**
- **Documentation. This is usually held in a variety of formats and applications, however, they are rarely current.**
- **User knowledge. What is the users understanding of how and where key data is held and displayed?**
- **Naming standards. A surprisingly good source of information, column names in tables can give a strong hint to their use and relationship to other columns.**



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Once you have gathered a basic picture you will need to investigate the data itself to verify any documentation and try to understand in detail where the data is held and how it relates to other data. There are a number of problems common across most systems, these include:

- **Data columns being used for multiple purposes.** It is quite common for limitations in an application to be overcome by creative use of fields. Thus a field used for one purpose contains data to identify data for other uses. Examples of this type of usage are comment fields being used to hold structured information, these comments may contain data that is sensitive for example a temporary address or phone number.
- **Invalid Data.** As applications and databases evolve and merge with other systems data may be created that is invalid. Users usually have an idea that this invalid data exists however have made the decision to ignore the data problems as there is no critical problem that would justify the time to clean up the data.

These data issues must be understood prior to scrambling a database.

Documentation and Traceability

It is hopefully obvious that the ability to demonstrate best efforts have been made to scramble data requires a documented trail. Turning the task into a normal IT project will allow you to use your normal change control, testing and delivery methodologies. These are usually very mature in most organizations. The documentation and control should include:

- **Which columns are sensitive and need scrambling?**
- **Who has access to any scrambling functions, i.e. the code that scrambles should be protected as well.**
- **A before and after report of what the data has been changed from and to. You can use database compare tools such as Datamaker for this or generate triggers to update audit tables.**
- **Who has access to any working schemas or files used in the scrambling process?**

Column Name	Sensitive	Fixed Value	Scramble Function	Datatype	Mandatory
CARD_ID	<input checked="" type="checkbox"/>		'HASH1',123	NUMBER(10)	<input checked="" type="checkbox"/>
CARD_NUMBER	<input checked="" type="checkbox"/>		'LIST','CREDIT CARD'	VARCHAR2(30)	<input checked="" type="checkbox"/>
TYPE	<input type="checkbox"/>			VARCHAR2(2)	<input checked="" type="checkbox"/>
EXPIRATION_DATE	<input type="checkbox"/>			DATE(7)	<input checked="" type="checkbox"/>
PEO_ID	<input checked="" type="checkbox"/>		'HASH1',345	NUMBER(10)	<input checked="" type="checkbox"/>

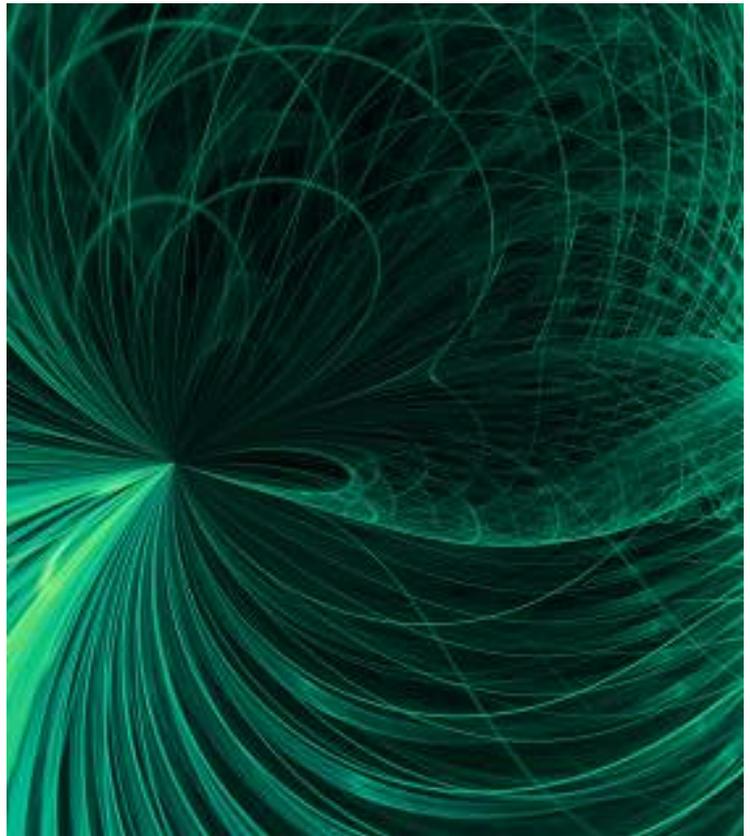
Figure 1 – Datamaker stores and audits which scrambling functions have been applied to each column



Scrambling Methods

There are numerous methods used to scramble data, however, I shall break them down into three categories:

- **Simple independent functions to put in random text, dates and numbers.**
- **Multi table column values, for example, an account number is used in lots of tables and as an identifier in other applications.**
- **Offset values, for example, if a date is adjusted then other related dates must shift in line with the original date; if a post code is changed then corresponding address lines must also shift.**

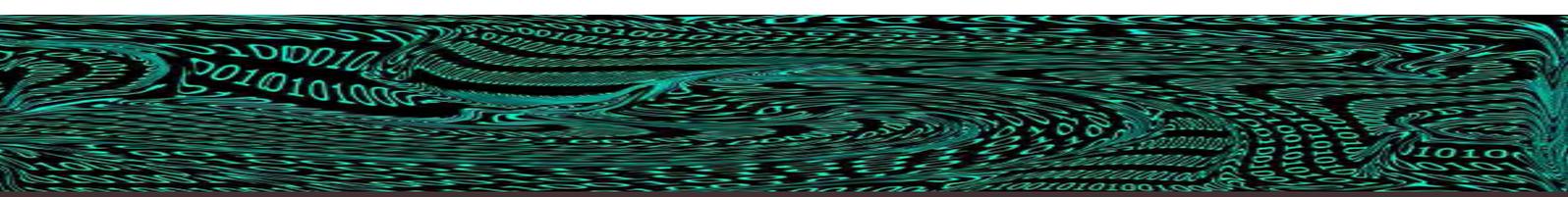


When building up your library of functions remember that there are lots of powerful functions readily available, sources include:

- **Database functions – Every RDBMS comes with a vast library of built in functions many of which can be built up to scramble data quite easily.**
- **Toolsets – Tools such as Datamaker come with many pre built functions.**
- **Your own code – Some of the scrambling you need will be very specific to your systems, for example, customer numbers can be built up of combinations of locations, dates of birth and partial names. There will be code in your system already that builds these numbers so use the same function as part of your scrambling strategy.**
- **The internet – Provides a vast array of free code snippets which can be easily used.**



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Using Seed Tables

A very effective technique to scramble data is to use one or many static or temporary tables to hold data that can be included as part of your scrambling routines. These tables can include a list of made up customer names, product names, addresses, etc.



Static Tables

Seed Data Type	Name	Title
Accounting Periods 2006/8 - 1	Amanda	Mrs
Accounting Periods 2006/8 - 2	Amanda	Ms
Business Type	Angela	Mrs
Country	Anita	Mrs
Credit Card	Ann	Miss
Currency Code	Anna	Mrs
DayOfWeek	Anne	Mrs
FemaleNames	Anne	Ms
FirstName	Ashley	Miss
FirstNameandTitle	Beate	Fr
FlightRoutes	Betty	Mrs
Indian Cities		
Job Titles		
MaleNames		
Marital Status		

Figure 2 – Datamaker seed tables with examples of female names and titles

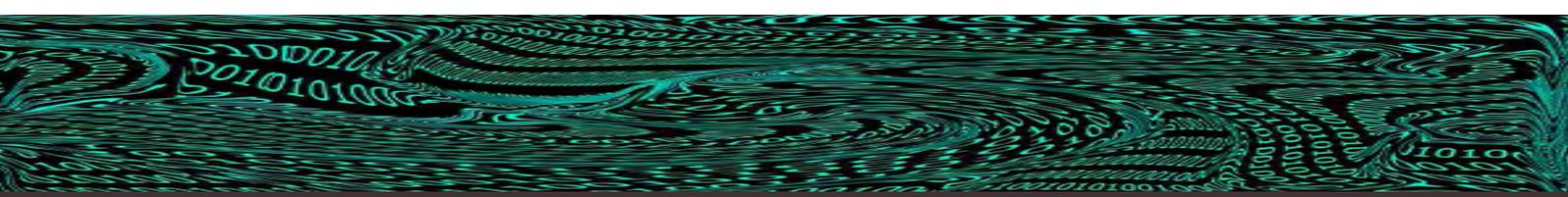
It only takes a simple piece of SQL or, even better, a simple database function call to replace the data being extracted with data from the seed table.

Some of the main advantages of static tables to feed the scramble routines are, the seed tables contain data familiar to testers; it can be added to very easily and can be customized to specific locales. For example, it is very easy to create specific groups of addresses for each country.

These seed tables should be populated prior to beginning the scrambling and verified that they contain no production data.



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Dynamic Tables

An easy to use and effective technique is to build tables that are exclusively used for a scrambling build. The next time data is extracted you would simply drop and recreate the tables. These tables tend to be used when data identifiers are used across multiple tables and a number must be changed to the same number across each of these tables.

```
create table hotel_shift
as select id, name, rownum row_num, 0 id_shift
from hotels order by id;

update hotel_shift h
set h.id_shift = (select d.id from hotel_shift d
                 where d.row_num =
                   mod((h.row_num + 3),
                      (select max(row_num) from hotel_shift)) + 1);
```

Figure 3 – An example SQL script to create a table of hotels and shift the id 4 away

Id	Name	Row Num	Id Shift
5854	Hyatt Regency Minneapolis	1	5770
3698	The Waldorf Towers	2	5790
3868	JFK Airport Hilton	3	5836
4077	New York Towers	4	5845
5770	Hyatt Regency Burbank	5	5908
5790	Hyatt at University Village	6	7071
5836	Hyatt Regency Long Beach	7	7074
5845	Park Hyatt Sydney	8	5935
5908	Hyatt Colorado Springs	9	5793
7071	Hotel Nikko at Beverly Hills	10	1415
7074	Hotel Nikko San Francisco	11	3679
5935	Grand Hyatt Hong Kong	12	3697
5793	Hyatt on Printers Row	13	3699
1415	Richmond Hill Hotel	14	3700

Figure 4 – The id 5854 would be replaced with id 5770, and so on

These cross reference tables can be very useful as they ensure that even if someone knows an internal id, they will not be able to find the specific detail of a customer. So, for example, if you scramble customers names and addresses AND you shift the internal customer_id field, the data will still retain full integrity, however it will be difficult to identify a specific customer. Other uses of this technique include:

- Detaching address_ids from Customer_ids allowing separating customer transaction details from address details.
- Detaching sign on information from personal information.



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Independent Functions

A library of simple functions to apply to data as it is extracted should be built up, these should include:

- Adding a small decimal increment to transaction values can mask individual transactions, for example, `SELECT TRANSACTION_AMOUNT + TO_CHAR(SYSDATE,'DD') / 100` will add from 0.01 to 0.31 to a number dependant on the date.
- Adding a number of days to all dates. A very simple transformation to implement, assuming all your dates are identified as date data type. This also has the obvious advantage of allowing time dependant process testing to be more accurate, an example would be:

```
SELECT ORDER_DATE + 7 FROM ORDERS
```

Bear in mind end of month processing can be affected by this. You may be better off using a cross reference table to match up periods, for example:

2008-02-23 00.00.00	7	54	2454520	6721	February
2008-02-24 00.00.00	1	55	2454521	6721	February
2008-02-25 00.00.00	2	56	2454522	6721	February
2008-02-26 00.00.00	3	57	2454523	6721	February
2008-02-27 00.00.00	4	58	2454524	6721	February
2008-02-28 00.00.00	5	59	2454525	6721	February

Figure 5 – Datamaker Period Table

- A simple lookup to a value in the seed table, for example:

```
select seed_value from (select seed_value, rownum rn
                        from seed_data
                        order by seed_value)
```

```
where rn = mod((in_rownum - 1),wk_count) + 1;
```

Will bring back a random value from a seed table.

- A simple substitution, for example `SELECT DECODE(BANK_TYPE,'C','S','L','M','P')` will reassign the code values C to S, L to M otherwise P.
- Top and bottom Coding. Setting a maximum and minimum value for a column, for example: `SELECT least(least(holiday_days,10) * -1, least(holiday_days + -1,-4)) * -1 holiday_days FROM People` The above will set the minimum holiday days to 4 and the maximum to 10.

The above techniques are sometimes know as Swapping or multidimensional Transformations.



Use a hash function using date, time and rownum as input to create random text or number values, for example:

```
translate(to_char(ora_hash(in_rownum +
1,4294967295,in_rownum)), '0123456789', ' ABCDEFGH')
```

- A simple text replace for a phone number is a perfectly simple way of cleaning data, for example:

```
SELECT '212-555-2121' PHONE_NUMBER, .... FROM
```

Multi-table column values

Many column values are repeated in other tables across the system. These values can be external identifiers, for example, an ACCOUNT_NUMBER may be used extensively across a system and across other applications, or they could be internal identifiers for example ACCOUNT_ID. While changing external values is obvious changing the internal identifiers should be considered. If a user can identify an internal ID, sometimes they are displayed in reports, XML messages, error messages etc then data is no longer masked.

The first problem is tracking down all of the links between tables and columns (see the section “Know your Data”) once this is done you need to make sure that the same scramble functions are applied to all of the related columns. Identifying these columns may need a tree walk across your model, for example:

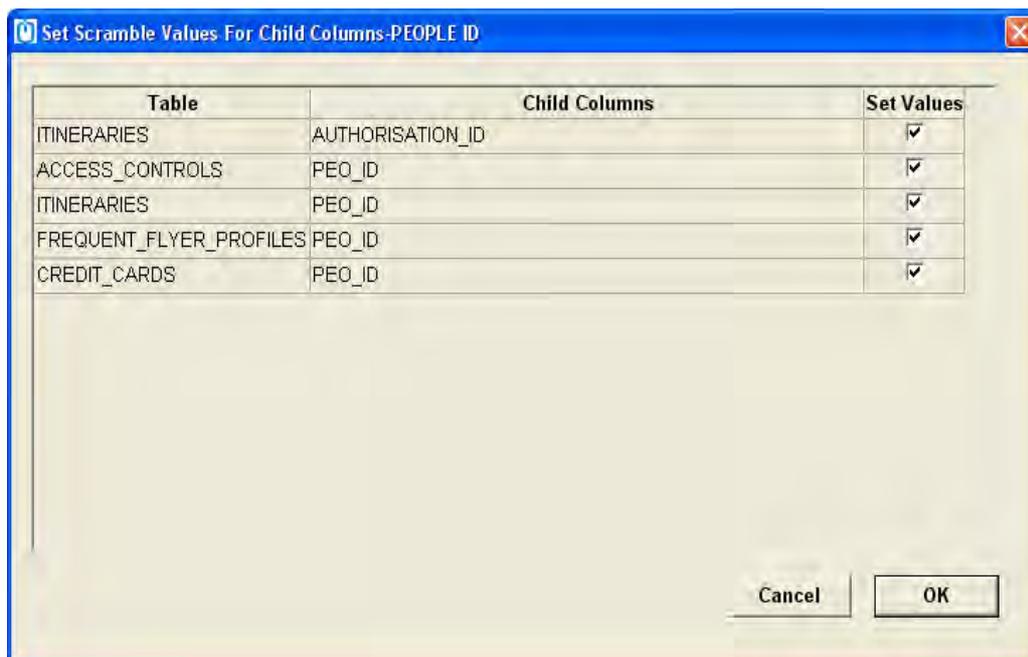
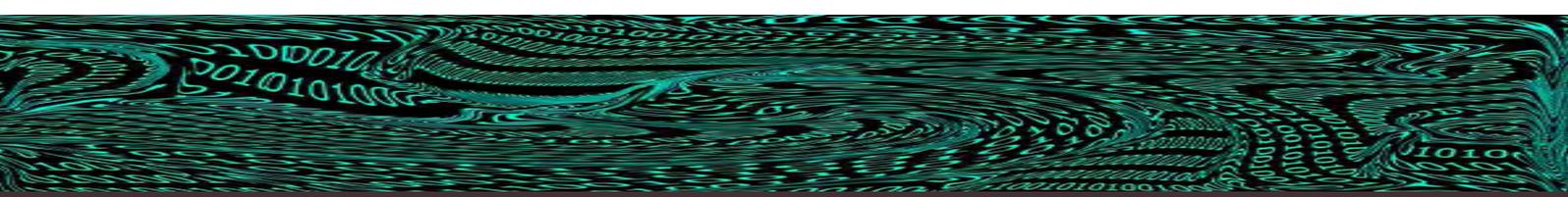


Figure 6 – A tree walk using Datamaker to identify internal IDs





Functions that are used in multi-column scrambling should include:

- A simple character by character replacement is an effective technique, basically shift character 5 and 6 in a string identifier to one more less and one more respectively. An example would be:

```
SELECT substr(card_number,1,6) ||  
translate(substr(card_number,7,1),'0123456789','1234567890') || substr(card_number,8)  
CARD_NUMBER FROM CREDIT_CARDS
```

In this example, the 7th character is being shifted up by one. As long as you apply the same function to all of the occurrences of this CARD_NUMBER then the system will retain integrity. Bear in mind that sometimes the column may be used for other purposes. For example, the column could contain 'NO CARD NO YET', the scrambling function would then fail.

- Hashing is a key component in multi column replacement. It allows values to be transformed to the same value every time dependant on a hash key. For example, 1 would be transformed to 7, 2 to 6, 3 to 1 etc. Each value has a unique hashed value and is repeatable based on the hash key. An example of this would be:

```
substr(translate(to_char(ora_hash(in_value,4294967295,in_parm1)),  
'0123456789','1234567890'),1,9)
```

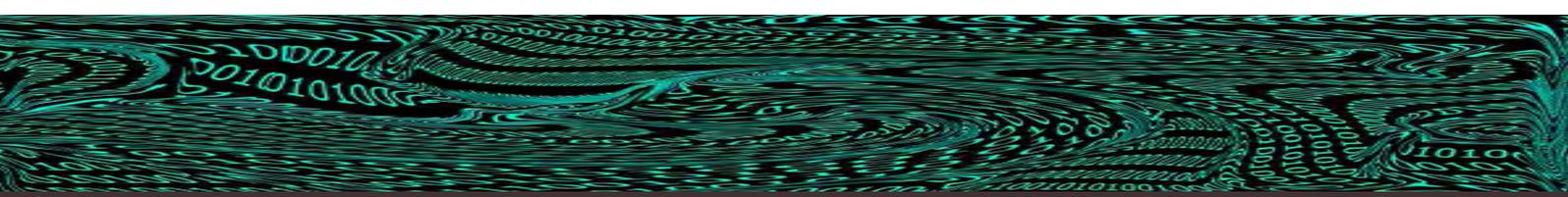
This would build a hashed Social Security number.

- Using dynamic seed tables (see figure 4) will build an exact replacement value for each identifier. You need to protect the seed table as it contains the “key to crack the code” and you must also protect the offset algorithm, as this can be used to identify data.

Using the above techniques, it is possible to apply incremental updates to your development environment. So, for example, if you extract sub sets of production transaction data to keep your development data up-to-date, you can run an extract and import and the new data which will still makes referential sense. You MUST, however from time to time change any offset values, hash keys or simple algorithms and refresh the test databases as users will eventually work out the old and new values.



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Offset Values

Managing offset values can be more complicated as data in one column/table must be related to the other column/tables values for the system to operate in the same way as production. Obviously understanding where these types of relationships exist is crucial (see “Know your Data”). The types of offset values include:

- **Micro aggregation – The values of prior rows in a set of transactions refer to each other. For example a TRANSACTION_BALANCE is dependant of the TRANSACTION_AMOUNT and the TRANSACTION_BALANCE of the prior transaction.**

current balance	previous balance
RSUBTRACT(^PREVIOUS_BALANCE^,^AMOUNT^)#	REKCSQ}(5,SELECT NVL(CURRENT_BALANCE,0) FROM PURSE_ACCOUNT WHERE PURSE_ACCOUNT_ID = ^PURSE_ACCOUNT_ID^)#
RSUBTRACT(^PREVIOUS_BALANCE^,^AMOUNT^)#	^CURRENT_BALANCE(-1)^A
RSUBTRACT(^PREVIOUS_BALANCE^,^AMOUNT^)#	^CURRENT_BALANCE(-1)^A

Figure 7 – Calculating current balances based on the data in previous rows

- **Application process driven aggregations – Many systems have application components that calculate balances based on transaction throughput. These tend to be separate processes which can be run stand alone. For example, if you are adjusting transaction amounts the customer balances may not match. Running the balance adjustment process may be required to reset these values.**
- **Offset dates: If you adjust dates then other values may well have to be reset. There are many examples of this such as:**

Dates of birth: Adjusting this by a few days, will alter the age and also the age bracket so a person may move into a different insurance premium.

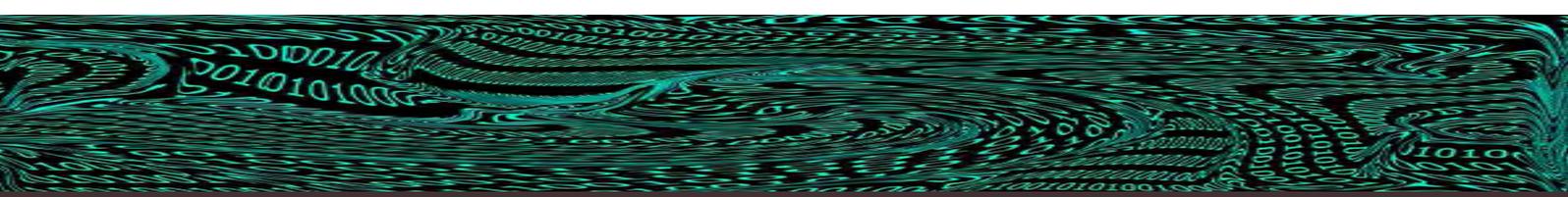
An Order Date: The Ship Date is after the Order Date, thus adjusting one date means the other must move by a similar amount.

Invoice Date	Reservation Date
@addranddays (^RESERVATION_DATE^, 0, 60)^	@addranddays (^DEPART_DATE^, -60, 0)^
@addranddays (^RESERVATION_DATE^, 0, 60)^	@addranddays (^DEPART_DATE^, -60, 0)^

Figure 8 – In Datamaker the Invoice Date, Reservation Date and Departure Date are offset from each other

The aggregation and setting of offset values can be the hardest part of any scrambling project. In my experience, the extensive use of dynamic tables prior to create offset lookups is an effective technique, especially with date type data. In addition, the ability to use portions of application code may need to be incorporated into the scrambling routines to reset end of day balances, customer totals etc.





Data Creation

Many organizations have very strict data usage restrictions and may well need to create data from scratch to use in their development and testing environments. Having no access to production data is common in many government departments as well as more and more health care and financial sectors. At first creating data from scratch may seem like a difficult task, however, when you consider some of the difficulties with scrambling and the basic problem of developing with full size databases that are often out of date it may well be an easier option.

The basic procedures to do this are:

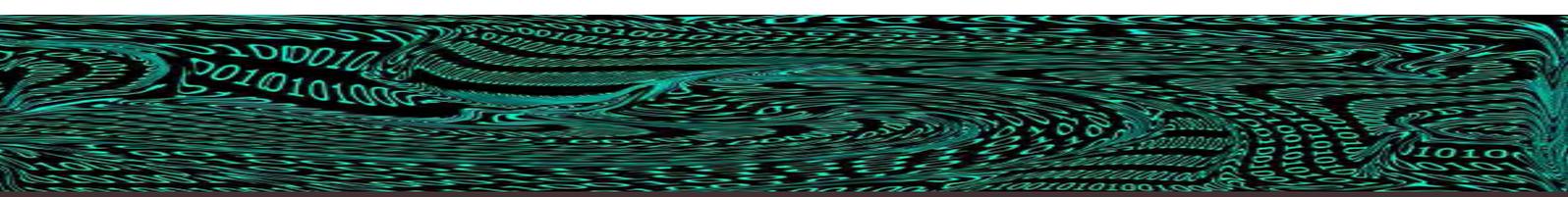
- **Create a standard data object, for example a Customer.**
- **Tokenize or parameterise those objects such that you can vary them when you create them.**
- **Inherit objects such that you can make your own edits without affecting the original data objects.**

Infrastructure Parent Child Foreign Keys ~NEXT~ SQL Lookups	Fixed Values Text Status
Offset Dates relatives to each other Current Balance set by transaction amounts	Random Ranges List of Values Text Seed tables
Boundary Values Equivalence Partitioning Dates +/-1	Conditional If Logic

Figure 9 – Data object components



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Library of Functions

Once you have completed your analysis and built a library of standard functions you can use these functions across the enterprise to scramble data in other systems and linked applications.

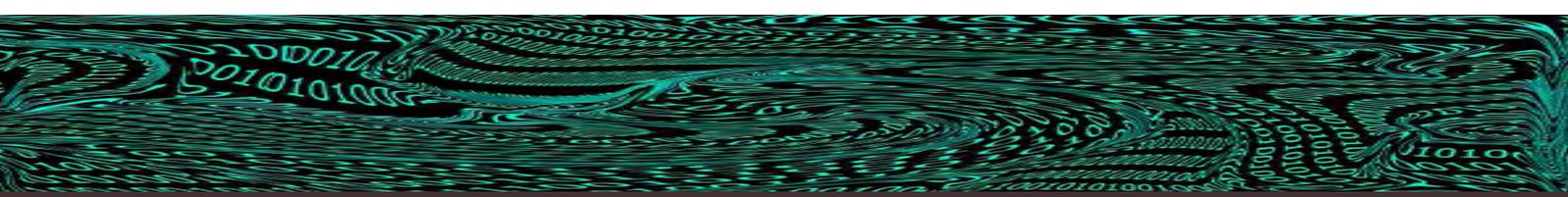
CHAR	RANDOMTXT	randomly scrambles original text
DATE	RANDOMDATE	Randomly age the date value
NUMERIC	HASH	Use Java hashcode to produce checksum value
NUMERIC	HASH,123	Use Java hashcode to produce checksum value and multiply by 123
NUMERIC	HASH,789	Use Java hashcode to produce checksum value and multiply by 789
CHAR	US HASH SSN	Use Java hashcode to produce checksum value of a US social security number
CHAR	US SSN	Produce a random US social security number
CHAR	USZIP+4	Produce a random US zip code with the extended 9 digit format
CHAR	USZIP	Produce a random US zip code in the 5 digit format
CHAR	USPHONE(7)	Produce a random US Phone Number in the 7 digit format
CHAR	USPHONE(10)	Produce a random US Phone Number in the 10 digit format
DATE	DAYSBEFORE(nnnn)	Take nnnn days off the original date
DATE	DAYSATER(nnnn)	ADD nnnn days off the original date
NUMERIC	PERCENTAGE(nn)	calculate the nn percentage of the original
NUMERIC	NUMERICRANGE(n,n)	produce random number between n and n
NUMERIC	INTRANGE(n,n)	produce random integer between n and n
CHAR	CREDITCARD	Produce a random credit card number
CHAR	EMAIL	Produce a random email address
CHAR	CHAR HASH	Use Java hashcode to produce checksum string value
NUMERIC	NUMERIC HASH US SSN	Use Java hashcode to produce checksum US social security number
CHAR	CHAR NUMERIC HASH	Use Java hashcode to produce checksum string value that consists of digits

Figure 10 – A list of DB2 standard functions

For each table in the application you must produce and store some level of documentation to verify the scrambling is effective and sufficient. Spend some time looking at each column deciding on which function or transformation should be applied to each column. You must also note any:

- **Pre processing required to build cross reference lookups.**
- **Post processing balance aggregations etc.**





Column	Usage	Masking	Notes
Person ID	Manufactured key	Replace key with alternative using reversible algorithm	Will need to demonstrate source of data
Last Name		Replace with plausible alternative	
First Name		Replace with plausible alternative	Link to Gender
Middle Names		Replace with plausible alternative	Possibly Link to Gender
Gender		Leave	
Date of Birth		Replace with plausible alternative	What is plausible depends on the application!
Marital Status		Leave	
Previous Name		Replace with plausible alternative	
Title		Leave	
Address Line 1			All need to be consistent – no good being 57 Any Street if that does not match the post code
Address Line 2			
Address Line 3			
Address City			
Address County			
Address Country			
Address Postal Code			
Telephone – Home			Should match up with address?
Telephone – Work			
Telephone – Direct			
Remarks 1	Mobile phone #		Unofficial use of a field but still requires masking

Title, Gender and Marital status have been left unmasked – but how many divorced, female Lieutenant Colonels are there in your database?

Figure 11 – An example Person Table with associated notes



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New Builds and Releases

An often forgotten problem with scrambling is that minor and major new releases and builds may come thick and fast. The scrambling toolset must be able to handle:

- **The addition of new possibly sensitive columns.**
- **The addition of cross column relationships and offset values.**
- **The addition of new functional requirements which may need new seed tables.**

It is important that the scrambling methods are updatable quickly and you do not have to spend time waiting, for example, for a DBA to update some scripts. If this happens the initial work will be quickly lost and production data will begin being used again in development and testing.

Summary

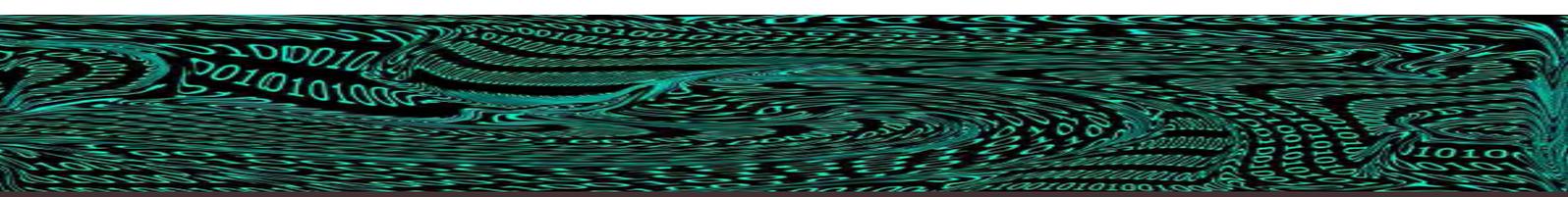
Scrambling projects often start out as a small request to the DBA team to “Do something to make sure production data is not being used in development!” While the DBAs may be able to do a quick job to scramble some columns, the responsibility or data ownership cannot live with this the DBA team. A scrambling project should come under normal application control and be the responsibility of the development team in conjunction with the application “data owners”. Too many projects have failed to deliver even basic data security by going down this route.

A scrambling project should include:

- **Understand your data - Its peculiarities, quality issues and interfaces.**
- **Agree up front what data is sensitive – Don’t forget to include internal IDs.**
- **Discuss the different methods and how they apply to the application as a whole and in detail at the column level.**
- **Build up a library of functions – Consider reusing some of your existing code which may handle non standard situations.**
- **Consider buying in a toolset to scramble data.**
- **Consider creating data from scratch – It is often easier than you think and has many benefits in terms of the amount of code covered in testing.**
- **Document and audit everything you are doing.**
- **Use normal project control mechanisms.**
- **Don’t forget that the scrambling has to be kept up to date – Design your scrambling application with this in mind.**



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About Grid-Tools

Grid-Tools are specialists in test data creation, test data management and information lifecycle management. Their experienced personnel have been writing and developing solutions for large companies in both the private and public sectors for over 15 years.

The Grid-Tools Datamaker Suite includes a wide range of tools for test data management including such innovative products as Datamaker (a revolutionary tool that creates and publishes quality test data from production environments for development and testing and places this data in a central repository), DataShrink (for subsetting and shrinking databases), Data Test Professional (for managing the data feeding performance tools) and Data Archive (providing a different, more efficient approach to archiving).

Within a short span of time, Grid-Tools have picked up significant momentum and an impressive list of well known and respected customers and strategic partners world-wide.

The Grid-Tools methodology consists of using the “data-centric” approach to testing whereby, their focus is to ensure the quality of the test data you are using is of the right quality for successful testing.

About Huw Price

With over a 20 year career, Huw Price has been the lead technical architect for several US and European software companies. Specializing in test automation tools, he has launched numerous innovative products which have re-cast the testing model used in the software industry. As well as building new products, he has become a serial entrepreneur building-up three software companies and selling their technology to larger, less agile competitors. Huw has provided high-level architecture design support to multinational banks, major utility vendors and health care providers. A strong believer in balancing pragmatism with a visionary approach, he has been able to rapidly bring new products to market while maintaining strong quality control.



Huw’s newest venture, Grid-Tools, has quickly redefined how large organizations need to approach their testing strategy. Grid-Tools has introduced a strong data-centric approach to testing, launching new concepts such as “Data Objects”, “Data Inheritance” and “A Central Test Data Warehouse”. Currently working with leading edge testing companies such as Fiorano, Facilita and Emprix, Grid-Tools are building on the strategy of improving automation tools and associated structured methodologies.

Issue
30

THE TESTER

December 2009 Issue

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TESTING EVENTS CALENDAR (p18)

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2 WORKSHOPS (p11 – p17)

Thursday 10 December 2009

Next Conference: Motivating Testers

Keynote Presentations

- The Real QA Manifesto
- Real System Testers Test at 11

Track Sessions

- Establishing a Testing Practice that survives
- It's the (test) environment, stupid!
- Advanced Keyword Driven Testing with Free Tools
- The Curious Art of Anti-Malware Testing

Interactive Workshops

- Test Automation using a Domain Specific Test Language
- Requirements for Testers



Software Testing Specialist Group

Please note that any views expressed in this Newsletter are not necessarily those of the BCS.

FROM THE EDITOR

Matt Archer, Editor

Welcome to the December edition of *The Tester*, which includes the publication of our SIGiST conference dates for 2010. Our continual aim is to deliver bigger and better SIGiST conferences. If you have any thoughts about what a bigger and better SIGiST would mean to you, feel free to contact myself or any of the other committee members to discuss your ideas.

Our first article this month comes from **Matt Conway**, a seasoned testing professional from one of our major UK banks. Matt shares his thoughts about what it means to be a 'career' tester. If you are a tester looking for work or a recruitment consultant looking for candidates, I'm sure you'll find this article an interesting read.

Our second article is by **Yann Gloaguen**, an offshore delivery manager for SQS. Yann stresses the importance of communication with suppliers and highlights the importance of fully understanding all those KPIs that we so often take for granted.

If you are inspired by reading the 2 fantastic articles in this edition and would like to become a published author in *The Tester* yourself, then please email me.

I look forward to seeing you all at the conference in December. In the mean-time, happy testing!

Matt Archer

The Tester Editor
BCS Specialist Group in Software Testing
matthewjarcher@googlemail.com

SIGIST CONFERENCE BOOKING INSTRUCTIONS

**If you would like to pay online,
you can use our new online
booking and payment system.**

www.bcs.org/events/registration

**If you would like to pay by
cheque, you can download a
booking form.**

www.bcs.org/upload/rtf/sigist-101209-book.rtf

**If you have a query relating to
making a booking, please contact
Gemma Liddiard, Specialist
Groups' Officer.**

Tel: (01793) 417656

gemma.liddiard@hq.bcs.org.uk

WEBSITE LINKS

BCS SIGiST website:
www.SIGiST.org.uk

SIGiST Standards Working Party:
www.testingstandards.co.uk

SIGiST UML Testers Forum:
www.umltesters.org

So in summary Career Testers need good Requirements not “specialist skills” in fact the specialist skills they need are the ones they already have, they are testers and think outside the box with an inquisitive mind.

So can this also be extended to Testing methodologies?

Yes of course it can. A few years ago I worked for a media company that decided that Agile would suit their needs. We had no experience at all with the methodology but had a consultant in for a few weeks to help. Once we had the basics it was quite easy to adapt our skills and to be honest it's not a great deal different to DSDM. So Agile waterfall V model iterative, yes we Career Testers can do it all.

Give us the requirements and we will test!

What are Career Testers?

These are people with a vested interest in the world of Test, on a Testing career path for a number of years and usually qualified ISTQB or similar. Not developers dipping their toe in the water. Don't get me wrong ex developers can make very good testers, in fact my IT career started in development. Also not Business Analysts who were once told to do some testing and now think maybe this is the new career for them as a Test Manager. Again some of these Business Analysts make good Testers but you have to start at the beginning and work your way up to understand Testing before you can manage it.

What is the basic career Path?

Tester – executes tests, reports defects.

Test Analyst – Above, plus analyses Requirements and writes tests.

Senior Test Analyst – Above plus advises on Test coverage and helps resolve issues.

Test Lead – is the central point of contact for Test on the project.

Test Manager – Runs with two or more projects and the Test team.

Senior Test Manager – Has a few Test Managers working for them.

Program Test manager – Runs a team of Test Managers dealing with Programme level escalations and issues, only used for Programmes and often a temporary post.

Head of Test – Responsible for all the Test team, budgets, resourcing, etc.

The above is just an example. Not all levels are required in all companies. Often just two are used by smaller companies, Test Analyst and Test Manager.

There is no fixed time in one role that means you need to progress although you should master the role before you move on. I think it is personal choice. In my nearly 12 years in the field of Test, I have at each step thought long and hard whether to take another step back from the 'coal face' of Testing and indeed as a Senior Test Manager I am again facing that dilemma now.

So how do you advertise to get these career testers?

State you require a Career Tester; that they must have five years continuous testing employment, and that they have a testing qualification like the ISTQB Foundation Certificate as a minimum. Note that holders of the Foundation Certificate may not necessarily be good testers, but they should at least have a level of understanding on test terminology. Career Testers are likely to hold higher level qualifications, and it might be useful to specifically ask for these, e.g. ISEB / ISTQB Advanced / Practitioner. However, bear in mind that there are some good testers out there, who don't hold any testing qualifications. These Career Testers are likely to have a large number of years' hands-on experience.

The problem we all have is that more and more companies are understanding now that Testing is important and saves money, so it's the big growth area in IT. Therefore everyone wants some.



Matt Conway is a senior Test Manager with a major Bank where he manages the Revenue workstream, overseeing several parallel projects, as well as the Global upgrade to Quality Centre 9.2, involving over 75,000 users and 12,000 projects.

He started his IT career after obtaining a BSc in Computer Science, specialising in application development, and worked as a Developer for three years for a Local Council and an Asset Management company. While working for the Asset Management company he moved from Development into Testing after taking his ISEB Foundation certificate, where he quickly moved to the role of Test Manager. He then worked for an international company specialising in chip and pin as Test Manager for 2 years, then a media company as Test Manager, before his current role. He has over eleven years Testing experience, mostly as a Test Manager.

He passed the ISEB Foundation certificate many years ago, and was one of the first to pass the ISEB Intermediate certificate in 2008. He is awaiting the exam for the ISTQB Advanced Test Manager, after taking the UK pilot course. He has contributed to the review of sections of the new ISO Testing Standard. He is also a member of the BCS.

LIBRARY UPDATE

Hello there, as librarian for the SIGiST I would like to take this opportunity to tell you about a few new additions to the library bookshelves and to update you on our plans.

New Books

The first new addition to our expanding resource is "How we test software at Microsoft" by Alan Page, Ken Johnston and Bj Rollinson. This signed copy was donated by Bj after his interesting and informative presentation during the December '08 SIGiST conference and it was brilliantly reviewed by Sarah Salahuddin at the June meeting. Details of both presentations can be found on the SIGiST web site.

The second acquisition is "Fatal Defect - Chasing Killer Computer Bugs" by Ivars Peterson which was very generously donated by Dorothy Graham who is herself is an avid collector and reader of a wide range of materials and never fails to highlight an interesting and thought provoking resource. She had mentioned this book to me previously and I think I somewhat twisted her arm to get this copy into our library. Although published in 1995 its message is still valid today and I will include a more detailed review in a future addition of The Tester magazine.

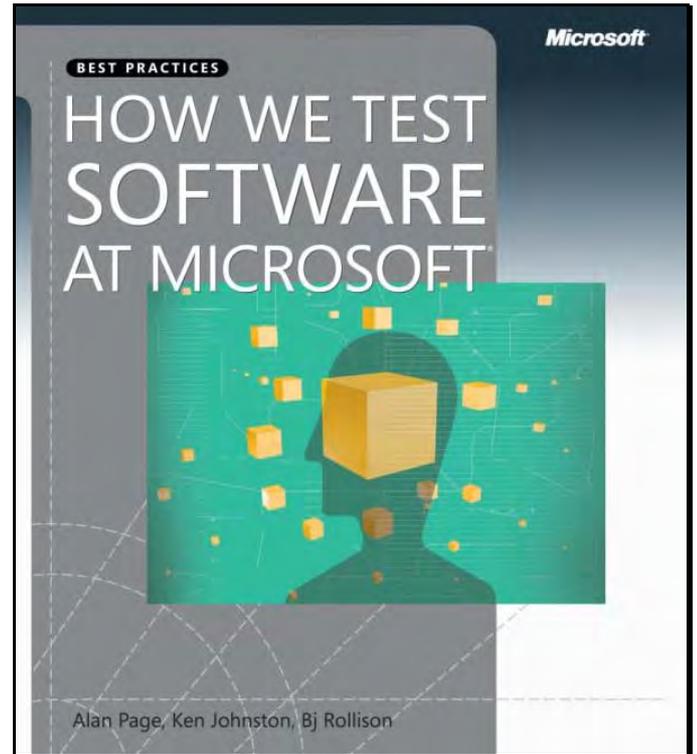
The third book I would like to tell you about is a new purchase for the library and it came from a personal recommendation by Gitte Ottosen of Systematic Software, Denmark. She couldn't recommend it highly enough and said that a number of her team had already purchased their own copies! Look out for the full review of "Agile Testing – A Practical Guide for Testers and Agile Teams" by Lisa Crispin and Janet Gregory in the next edition of the Tester.

Update

Firstly, the library is expanding (as you can see from the generous donations mentioned above) and also what I will term 'refreshing' – not to say that the books and resources we already have aren't useful but as with every discipline we need to keep up with current and emerging practices. So look out for the new books update in future editions of The Tester. And of course if you have any recommendations please let me know at siglib@iotest.com.

It is also our intention to have a library area at each of the conferences. There will be a selection of the available books to peruse as well as details of the full library. Hopefully this will make it easier for you to select the resource you need and also to return any books previously borrowed. Again, feel free to stop by and pass on any recommendations you may have.

Sue Atkins, SIGiST Librarian



BORROWING A LIBRARY BOOK

Looking for a testing book but not sure which topics are covered? Or are you trying to decide which testing book to buy? Or do you simply want to increase your testing knowledge? If the answer to any of these questions is 'yes' then the SIGiST Library could help!

The SIGiST Library has lots of testing books covering a variety of topics and they are available to borrow for a period of 4 weeks - free of charge. Extended loans are allowed as long as the book has not been requested by another SIGiST member.

Topics include (amongst others) Requirements testing, Reviews/Inspections, Test Management, Test Techniques and Test Process Improvement.

If you would like to know more about the library and books available, or for any queries, please contact Sue Atkins on 01697 748 748 or email her at siglib@iotest.com. Happy Reading!

Governing Offshore Testing Efficiently

Defining metrics and measures that truly support onshore management

December 2009
Yann Gloaguen



Abstract

The success of outsourcing test functions of organisations to offshore is often inconsistently perceived by stakeholders. Offshore partners often genuinely believe they deliver above expectations, their IT service delivery counter-parts are commonly “neither satisfied nor dissatisfied” and the Business, on the receiving end, recurrently criticizes quality and responsiveness of the change delivery machinery.

The responsibility for this inconsistency is often, and has for a while now, been blamed on “ineffective communication”. Business timelines, functional specifications, and work package prioritisation, are often pointed out as “misunderstood” by the Business and “inappropriately defined” by the offshore partner. Failures and faults in the delivery process are documented and shelved, alongside books and “spiritual guides” to effective communication processes, detailing pros and cons of models and channels.

The reality is frustration resulting from the different perceived levels of satisfaction amongst participants is often not down to “communication” but to assumptions made on expectations, early in the service/engagement definition.

This article focuses on reasons why such different perceived levels of satisfaction exist amongst participants in a multi-parties engagement.

Communication is a medium

We have all read about, established and managed operating models with offshore components. Communication models often occupy an important place, are well thought through and detailed. The “Ways of Working” will often feature either the ladder or the funnel communication model. Although they are the most popular communication methods, both have pros and cons and both have been blamed on for hindering change delivery. The truth is they both have cons; they both can have a negative impact on delivery if forced upon organisations for which they are not a good fit.

Even when scoped appropriately and implemented correctly, communication models still get blamed for under-performing. Are we all bad communicators? Some are, some aren't. I believe in most people's ability to efficiently communicate and technologies to support this communication. VoIP instant messaging and other video conferencing capabilities are available to most of us, and most of the time widely and rightly used.

So why is there is such a gap, despite all on-going communication, in between achievements perceived by the offshore partner and its client? "Expectations!" some will respond – and almost rightly so. Experience, however, shows us that expectations, key performance indicators and service level agreements, are often, if not always, "set" through comprehensive contracts, reviewed and signed-off by sponsors and lawyers from both sides. Service level agreements are detailed through metrics and targets, then used to govern the managed service. Despite it all, we still face the same gap. Could the real point of failure be assumptions on expectations?

Metrics definition overlooks measurements

What is often overlooked or inadequately detailed in those - after all not so – comprehensive contracts, are measurements for key performance indicators and service level agreements metrics. One will often assume measurements and focus on defining metrics and targets.

"Staff retention", "capacity buffer", "productivity", "defect detection", "milestone met" and "test coverage" are common metrics found in contracts, and are often used to govern a testing managed service. They all seem simple and easy to measure and report on. They are common, yet different from one organisation to another and from one offshore partner to another. This is through the way they are measured; and their measurement will often look inappropriate to the "unsatisfied", despite meeting the agreed targets set in contracts.

"Staff retention", for example, which must reflect knowledge retention within the managed service, will have a "planned / unplanned staff loss" component and will usually be calculated on a "rolling period". How does the "rolling period" translate? Taking a team of 40 testers on the 1st January, to some, achieving 75% staff retention will mean that 30, of the initial 40, are still in the team at the end of the month. To others, it will mean that a maximum out of 6, not 10, testers will have left the team (34 remaining from the initial team of 40, 6 new joiners: 73.9% staff retention). Add to the calculation the definition of "planned" staff loss and you will most certainly implicitly measure staff retention differently from your offshore partner: is individuals' contract termination planned or unplanned? And we still need to add to the intricacy of the calculation, concentrating on ramp up and down periods of a project. How would you amend your measurements to cater for the continuous change in the team profile? How would you redefine the target(s) staff retention percentage over those periods? It is essential to explicitly define all of the above to mitigate the risk to business continuity – this is knowledge retention after all.

"Productivity" is also often under the spot light and is consequently one of the most challenging areas to assess. Some will use the number of tests executed per person per day, some will use requirements coverage increase over days spent. The truth is, "productivity" is a measure of the value added by individuals over a period of time. It cannot be solely quantitative, this is testing, it must be qualitative. Testing is not silo-ed to executing tests, testing is understanding a change, assessing its impact, planning testing, defining an approach, executing tests, gauging the residual risk and reporting, advising on findings. We will however, in most cases, associate productivity with the execution phase of a project, extrapolating it to other phases, assuming that if it increases during the execution phase, it is certain that we are doing better in the planning and design phases too. Well, no, not for sure. Measures have a great impact on individuals and work processes. From experience, calculating productivity based on number of test run per person per day will result in testers creating ever smaller tests as releases go on. The smaller the tests, the easier it is to achieve productivity targets. And this does not stop here, the smaller the tests, the least test points in a test and hence the more tests to run

for a release. Productivity measurements incorrectly defined will translate in a great support to business cases for teams' headcount increase: let's do more inefficient costly testing.

"Test coverage" is another abused metric. Some will calculate test coverage as being the number of tests executed over the number of tests in scope, however others will use a ratio of test requirements covered by tests over the overall number of test requirements. Or could it be the number of test requirements covered by ran tests over the total number of test requirements? And how does this fit with "requirements coverage"? Does it make much sense having one without the other? Good testing practices tell us that test requirements must be derived from business requirements – "requirements coverage" – and that tests must be derived from test requirements – "tests coverage". What degree of confidence will excellent "test coverage" give us when achieving poor "requirements coverage"? Most people defining metrics, measurements and targets will overlook these; they are not test experts. It is therefore essential they engage with central QA functions within organisations or independent test and quality management consultancies.

From the Business perspective, a metric of paramount importance: is "percentage of milestones met". This metric should be a true reflection of "time-to-market", of responsiveness to business demand, and is a metric that often sparks stormy discussions. Reasons are multiple. The first is the definition of a milestone. We have seen, on numerous occasions, milestones being mistaken for tasks and vice-versa. Milestones do not have duration and are the product of multiple tasks delivering towards one objective. A milestone is not "test approach analysis" but "test approach document signed-off". When milestones are mistaken for tasks, not only do we deviate from the plan, omitting dependencies from tasks to tasks and tasks to milestones, but we increase the number of "milestones", diluting failures. This brings us to a second consideration. When it comes to measuring "percentage milestones met", what milestones are reported on? For this metric to be a true reflection of "time-to-market", we need to hand-pick milestones from project plans, selecting the ones that, if missed, will directly adversely impact on the business. One could argue they all would. Selecting them all however, will result in diluting the impact of a missed one, hence the significance of identifying few business-relevant milestones from within a specialist project plan or organisation wide deliver process. Here again, central QA functions or independent test and quality management consultancies have a key role to play when setting-up the contractual.

Conclusion

Communication is rarely to blame for inconsistent perceptions of achievement amongst parties; it is what is communicated that is. Service level agreements and key performance indicators designation, too often focus on metrics identification and targets definition, ignoring means of measurements, therefore resulting in inconsistent expectations amongst participants.

One will argue that the time has come for leveraging best metrics and measurements, creating an industry standard to which all should adhere. Some metrics will be generic to off-shoring, some other specific to types of testing and delivery methodologies. Such tools would empower partnership or, relationship managers towards better defining flexible and effective governance models for offshore. They would be able to cherry pick metrics from a standard "bank", and agree, with their vendor, targets.

This being said, metrics do not deliver on projects. **Mark Firth, Offshore Delivery Director at SQS**, stresses that "*while the engagement level metrics are useful to measure a test organisations ability to deliver resources and services at a high level, they rarely address the issues that project and programme managers find frustrating once the testing team is on the ground*". A successful partnership indeed involves deploying the right tools and levels of governance at an engagement level, as well as engaging with the right people to deliver on projects.

SQS' continuous success in delivering offshore engagements, across sectors, is the direct result of not only a substantial investment in building in-house offshore governance expertise from which all clients benefit, but having qualified testing personnel, from test analyst to test managers, on and offshore, trained on SQS' Global Offshore Delivery Mode from which all projects benefit.



Yann Gloaguen is an eight-years industry practitioner, the last four spent with SQS. A regular speaker at testing conferences, he has been involved in setting-up, managing and governing large scale outsourcing programmes for FTSE 100 companies. He is currently responsible for Offshore Delivery Management at SQS.

CONFERENCE PROGRAMME

10TH DECEMBER 2009

DEVELOPING TESTERS

Stephen Allott, Programme Secretary

I am sure that as we approach the festive season you are all, like me, going to be very happy to say goodbye to 2009 which wasn't the best of years for many of us in the software testing community. We have all struggled to test ever more complex systems with fewer people in often very demanding circumstances. I do hope that the events that we and others in the software testing community have put on will have helped you in some way in 2009. Please come back in 2010 and tell us your success stories.

Our theme for December is Motivating Testers and I do honestly believe that we have put together a very exciting and thought provoking programme for our Christmas conference. Please pick out some of the ideas from the conference and workshops and apply them as soon as you can back in the workplace – I am convinced it will help motivate your own team as well.

To open our conference, in a perhaps controversial manner, we're delighted to welcome back an IT Professional who should need no introduction, Tom Gilb, author of several books, teacher and consultant to large blue chip organisations around the world. He'll argue for earlier involvement in the lifecycle and outlines his real QA Manifesto. Tom is also running a workshop which is all about requirements for testers. Steven Ramsay from Linklaters explains how to establish a testing practice that survives and Sasha Gilenson from Evolven Software will finish off the morning sessions by discussing test environments.

To wake us up after lunch I have invited the motivational man with the deep pan, Brad Burton, managing director of the UK's largest business breakfast meeting group (www.4networking.com). Martin Gijzen from Holland is an independent consultant providing us with insights (through a talk and a workshop) on how to use free automated test tools.

David Harley of ESET will take us through the curious art of Anti-Malware testing and to finish off the day we learn how "real system testers test at 11" from Clive King of Sun Microsystems.

We'll announce the lunchtime vendor sessions in the programme from now on and I would like to welcome Fanfare and BT who will talk at 1pm in

the exhibition area (Converged Applications: Automating Testing for Applications in a Complex Network).

Please book early, especially if you want to attend a workshop – these workshops are designed for your participation and places limited so please register now online at www.sigist.co.uk. Please note the workshops run alongside the main talks so you cannot attend both – why not bring along a colleague or two, attend all the sessions as a team and swap notes later.

We're always on the lookout for new speakers so please download our call for papers from the website and follow the instructions to submit your ideas for a talk or a workshop.

I hope you enjoy our December programme.

And Finally

Some dates for your diary . . .

Please make a note of the dates of our forthcoming conferences as attendance is on the increase and so we'd really like you to book your place early to avoid disappointment.

Upcoming Conference Dates

Thursday 11th March 2010 "Lean Testing"
Keynote: Wayne Mallison, Test Data Services

Tuesday 29nd June 2010 "Automation and tools"
Keynote: Mark Fewster, Grove Consultants

Thursday 16th September 2010

Wednesday 8th December 2010

Please enjoy the conference talks and workshops and please remember to make the most of the networking sessions and the exhibition.

I am keen to help people who have a good story to tell but are not professional speakers and so if you'd like any help in preparing an abstract or a talk please feel free to e-mail or call me directly.

May I take this opportunity to wish you all a very Merry Christmas and a Happy and Prosperous New Year.

Stephen Allott FBCS CITP
Programme Secretary
BCS Specialist Group in Software Testing
stephen.allott@electromind.com
+44 773 476 1363

DECEMBER 2009 CONFERENCE PROGRAMME

BCS SIGiST – Motivating Testers

10 December 2009

Royal College of Obstetricians and Gynaecologists

27 Sussex Place, Regent's Park, London NW1

08:30	Coffee & Registration, Tools & Services Exhibition opens	
09:15	Introduction and Welcome Stuart Reid, SIGiST Chairman	
09:30	Opening Keynote	
	The Real QA Manifesto Tom Gilb, www.gilb.com	
10:30	Networking session and commercial break	
10:45	Tea/coffee break Opportunity to visit the Tools & Services Exhibition Browse a selection of testing books from the SIGiST Library	
11:15	Establishing a Testing Practice that survives Steven Ramsay, Linklaters	Workshop M1 Test Automation using a Domain Specific Test Language Martin Gijzen, DeAnalyst
12:00	It's the (test) environment, stupid! Sasha Gilenson, Evolven Software	
12:45	Lunch break Opportunity to visit the Tools & Services Exhibition Browse a selection of testing books from the SIGiST Library	
	(13.00) Lunch time vendor talks including ' Converged Applications: Automating Testing for Applications in a Complex Network ' – Fanfare Software and BT	
14:00	The Share Point: From Box Room to Board Room – Get off your arse Brad Burton, 4 Networking	
14:15	Advanced Keyword Driven Testing with Free Tools Martin Gijzen, DeAnalyst	Workshop A1 Requirements for Testers Tom Gilb, www.gilb.com
15:00	The Curious Art of Anti-Malware Testing David Harley, ESET	
15:45	Tea/coffee break Opportunity to visit the Tools & Services Exhibition Browse a selection of testing books from the SIGiST Library	
16:15	Closing Keynote	
	Surprise Ending: Real System Testers Test at 11 Clive King, Sun Microsystems	
17:00	Closing Remarks	

The SIGiST committee reserves the right to amend the programme if circumstances deem it necessary
 Workshops will have limited places, to avoid disappointment try to book in advance.

ABSTRACTS AND BIOGRAPHIES

Opening Keynote: The Real QA Manifesto

Tom Gilb, www.gilb.com

Quality Assurance (QA) in software worldwide has in fact degenerated into testing alone. Software/IT management has ignorantly allowed this to happen.

Of course many parts of the industry have been well-aware of more cost-effective ways of delivering required quality in practice, but this has in fact been largely ignored; while granting very large Resources to testing alone.

It is time for a wakeup call!

This manifesto is here to tell the industry that;

1. testing alone is 10x more costly than doing Real QA.
2. testing alone is not good enough, this can and need not go on.
3. we know how to do real QA much much better than testing alone, using smarter upstream engineering practices, based on design, prevention and upstream inspections.

Tom Gilb is an international consultant, teacher and author.

His 9th book is 'Competitive Engineering: A Handbook for Systems Engineering, Requirements Engineering, and Software Engineering using Planguage' (August 2005 Publication, Elsevier) which is a definition of the planning language 'Planguage'.

He works with major multinationals such as Credit Suisse, Schlumberger, Bosch, Qualcomm, HP, IBM, Nokia, Ericsson, Motorola, US DOD, UK MOD, Symbian, Philips, Intel, Citigroup, united Health, Boeing, Microsoft, and many smaller and lesser known others. See www.gilb.com.

Establishing a Testing Practice that Survives

Steven Ramsay, Linklaters

This talk shall share the experience of introducing a Testing practice (TP) into a Law Firm with a turnover of over £1 billion. It describes how it has evolved over the last 4+ years to maintain its position within the organization, and provides lessons learned for those facing similar situations.

The author was impressed by last year's visionary theme, but frustrated by the lack of commercial ideas for test managers. This talk will describe how a TP was set up from scratch, and is now thriving but having to constantly change to ensure it meets business demands.

The practice's evolution has not been straightforward. Good and bad decisions have been made, but the ability to recognise changes in market conditions and adapt accordingly have determined its survival.

On arrival the author was confronted with no formal test function with testing performed by pressured engineers and disinterested users. Initially two testers were employed to form an internal test consultancy, persuading the business that testing was a 'value add' specialism. The next step was the creation of an independent test team, which has evolved into a TP; the current situation.

This expansion was not achieved simply by employing more permanent staff. The ability to respond to market conditions keeping fixed costs to a minimum is essential. A flexible sourcing model was adopted whereby testers are resourced from an external partner. Issues encountered with cost, the fixation with day rates and the pricing pressures from sourcing abroad are covered.

Financial pressures will force further change. Decisions on testing will be based on a risk management process handled internally; the next stage of the TP evolution will be for it to transform into a risk management practice supported by both internal and outsourced test resources.

This presentation will provide practical insights to anyone responsible for testing where it must be seen to provide value for money for the business.

***Steven Ramsay** is currently Service Continuity, Projects and Testing Manager for Linklaters LLP. My work has supported the introduction of ITIL disciplines across the IT Operations department. Prior to this I was an Independent QA and software testing specialist. This role followed two years as the QA Manager for ActivCard UK Ltd. My career in testing began at Imago QA Ltd where I was involved in all aspects of testing.*

It's a Test Environment, Stupid! (Best practices for test environment management)

Sasha Gilenson, Evolven Software

Today's growing complexity, scale and interdependencies of non-production environments often leads to serious environmental defects and stability issues in companies across multiple industries. The results are:

- Significant financial loss (likely millions of dollars) from inefficient use of organizational resources
- High risk for production outages as a result of environmental issues and inconsistencies
- Delayed time to market. Spending considerable time on deploying pre-production environments and resolving environmental issues

Existing testing and production management tools do not address the unique management requirements raised by non-production environments. A new approach is required to cope with the dynamism and complexities of these environments in order to create visibility and control of environments prior to production.

This presentation will address the challenges, risks and costs associated with test environment management, before suggesting best practices, approach and tooling to address this complex area.

***Sasha** enjoyed a long and successful career at Mercury Interactive, having led the company's QA organization, and a Business Unit in Europe and Asia. Sasha was Mercury's top "guru" in quality processes and IT practices and played a key role in developing Mercury's Business Technology Optimisation (BTO) strategy, advising numerous Fortune 500 companies on technology and process optimization. Sasha holds a M.Sc. in Computer Science from Latvian University and an MBA from London Business School.*

From Box Room to Board Room – get off your arse

Brad Burton, 4 Networking

You need more appointments

You need more sales

You need more motivation

YOU NEED to attend this seminar!

From starting up his own business, working in his underpants from a box room aggressively waiting for the phone to ring.

It's a story of delivering pizzas at weekends to keep his marketing business afloat to MD of largest joined up Business Breakfast Network in the UK & a top motivational speaker in just short of 3 years.

Brad Burton author of ground breaking business book, *Get Off Your Arse* takes us on a entertaining rollercoaster ride of how he told his employer to shove his corporate job up his arse.

Advanced Keyword driven testing with free tools

Martin Gijzen, Deanalist

Maintenance to the testware is a major threat to the continuity of every test automation effort. The advanced keyword driven testing approach greatly increases the chances of maintaining effective automated testing. One of the keys is defining high level keywords top down, creating a Domain Specific Test Language (DSTL). A second key is ensuring that non-essential details concerning tooling and interfaces are removed. It is often best that a developer implements the DSTL. This approach works for any kind of system and any set of interfaces and requires no programming skills from testers. It will be explained how it has been applied to very different systems (a GUI, a web services based billing system and message based payments systems), using only free tools.

Martin Gijzen is a test consultant, test automation architect, software architect and business analyst. He has been a keyword driven testing enthusiast for over ten years. He has also developed the ETA Framework, a freeware test automation framework. Martin is an independent consultant from the Netherlands.

The curious art of anti-malware testing

David Harley, ESET

The Internet seems to be over-endowed with individuals and organizations who believe that all anti-malware comparative tests are sound and that all complaints from the anti-virus and anti-malware sectors of the security industry simply represent the vendors trying to conceal their own incompetence.

The industry has indeed complained for many years about tests it considers unfair and misleading, but has had difficulty defining the nature of its objections and making clear what it considers to be good testing practice.

Recently, however, the anti-malware industry has started to join with the testing industry and other interested parties to clear some of the confusion and to make positive information available about distinguishing good tests from bad.

This presentation examines the main issues and difficulties surrounding product and comparative testing in the specialist anti-malware arena, and looks at the work of the Anti-Malware Testing Standards Organization (AMTSO), a coalition of security vendors, testers, reviews and so on, towards raising the standard of testing in this area.

David Harley BA CISSP FBCS CITP is Director of Malware Intelligence at the security company ESET, and a Director of the Anti-Malware Testing Standards Organization (AMTSO - www.amtso.org), which includes representatives of the security industry, antivirus testing industry, IT press and so on. He has (co-)authored over a dozen security-related books, and is currently putting together another, on testing and evaluating anti-malware solutions.

Real system testers test at 11

Clive King, Sun Microsystems

Bugs live in dark corners, but how do we know where to shine the light? Modern data centre class solution stacks are built from in excess of 100 millions lines of code from more sources than you can count on both hands. Serious integration testing of complex stacks is a challenge which most organisations shy away from with good reason, it is hard and it is expensive.

We describe a pragmatic approach based on extreme stress to expose critical component and integration issues in pre-production environments across the 5 major areas of system level risk: correctness, availability, performance, diagnosis and fear. We also discuss the implications of solution life cycle events such as patching or upgrades. The author has observed that evidence of, or the absence of, extreme stress in pre-production testing is correlated to the extent of post go-live grief.

Dr. Clive King is a Senior Staff Engineer at Sun Microsystems working in the support organisation. His core role is the diagnosis of performance, availability and data integrity issues for high end customers.

He is a BCS Fellow and a member of the BCS Academic Panel.

Workshop M1: Test automation using a domain specific test language

Martin Gijzen, Deanalist

A Domain Specific Test Language is keyword driven testing reaching maturity. It is defined by testers specifically for their system under test. It significantly reduces maintenance sensitivity of automated tests. With suitable tool support, it requires no programming skills to write tests with. The approach can usually be applied with test software that is already being used, with the same benefits but often requiring some programming skill.

The main part of the workshop focuses on defining and documenting a DSTL for a sample application. This means selecting an appropriately high abstraction level and removing irrelevant (interface and tooling) details for instructions. The DSTL instructions are documented using a template.

The final part will briefly consider a different system, additional techniques to improve the maintainability of tests and ways of introducing this approach into an organisation.

Examples will use the freeware ETA Framework, but attendants are free to use another tool or framework if they prefer.

Martin Gijzen is a test consultant, test automation architect, software architect and business analyst. He has been a keyword driven testing enthusiast for over ten years. He has also developed the ETA Framework, a freeware test automation framework. Martin is an independent consultant from the Netherlands.

Workshop A1: Requirement for Testers

Tom Gilb, www.gilb.com

The foundation for successful project management is being able to express your stakeholders (users, re-sellers etc.) most critical requirements. Stakeholders have requirements at the level of the improvements they expect to gain for themselves (i.e. savings, better customer relations), and at the level of the product (i.e. improved usability, security etc.).

Most conventional requirement methods are so weak, in so many respects, that everyone involved in writing and reading requirements are uncomfortable with the process. Something is clearly wrong, but people struggle to explain how requirements should be written.

We tackle the Requirement process head on. Grouping the Requirements at the appropriate levels (Stakeholder, Product, Sub-Product etc.). Categorizing the Requirements into logical and useful types (Function, Scalar, Constraints etc.). We optimize the description of the Requirement according to level and type (Functions without Design, Product Qualities quantitatively with Past, Tolerable & Goal levels, etc.). To manage and relate the Requirements, we use a set of parameters attached to each requirement (Version, Stakeholders, Impacts, Assumptions, Risks, etc.)

And finally we teach the art of raising the whole Requirement process from 1000 sub-requirements to a few critical Requirements that serve as the main guidance to the whole project.

Gilb's Requirement method is a real wake-up call for all software managers, and provides an exciting tool for all types of project managers and engineers.

Tom Gilb is an international consultant, teacher and author.

His 9th book is 'Competitive Engineering: A Handbook for Systems Engineering, Requirements Engineering, and Software Engineering using Planguage' (August 2005 Publication, Elsevier) which is a definition of the planning language 'Planguage'.

He works with major multinationals such as Credit Suisse, Schlumberger, Bosch, Qualcomm, HP, IBM, Nokia, Ericsson, Motorola, US DOD, UK MOD, Symbian, Philips, Intel, Citigroup, united Health, Boeing, Microsoft, and many smaller and lesser known others. See www.gilb.com.

2009 TESTING CALENDAR

There are many testing events throughout the year, not all of them run by the BCS.

If you would like your event added to this calendar, email me at matthewjarcher@googlemail.com

January 2009						
M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

29th: UK Testers Forum - Annual Summit
London (<http://uktmf.com>)

February 2009						
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12th: Pub Exploration of Software Testing
Bristol (<http://pest-global.org>)

March 2009						
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30	31					

4th: Software & Systems Quality Conf.
Dublin (www.sqs-conferences.com)

17th: SIGiST Conference
London (www.sigist.org.uk)

19th: TCL presents Dr James A. Whittaker
Exeter University (www.tcl-global.com)

April 2009						
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20	21	22	23	24	25	26
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29th: UK Testers Forum
London (<http://uktmf.com>)

30th: Pub Exploration of Software Testing
Bristol (<http://pest-global.org>)

May 2009						
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14th: Pub Exploration of Software Testing
London (<http://pest-global.org>)

20 - 21st: Next Generation Test Conference
London

June 2009						
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29	30					

17th: SIGiST Conference
London (www.sigist.org.uk)

25th: Pub Exploration of Software Testing
Leeds (<http://pest-global.org>)

July 2009						
M	T	W	T	F	S	S
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27	28	29	30	31		

16th: Pub Exploration of Software Testing
Bristol (<http://pest-global.org>)

29th: UK Testers Forum
London (<http://uktmf.com>)

August 2009						
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13th: Pub Exploration of Software Testing
Leeds (<http://pest-global.org>)

September 2009						
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17th: Pub Exploration of Software Testing
London (<http://pest-global.org>)

22nd: SIGiST Conference
London (www.sigist.org.uk)

October 2009						
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5	6	7	8	9	10	11
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15th: Pub Exploration of Software Testing
Bristol (<http://pest-global.org>)

28th: UK Testers Forum
London (<http://uktmf.com>)

5th: SQC 2009
London, www.sqs-conferences.com/uk

November 2009						
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12th: Pub Exploration of Software Testing
Leeds (<http://pest-global.org>)

30th - 3rd Dec: EuroSTAR Conference
Stockholm (www.qualtechconferences.com)

December 2009						
M	T	W	T	F	S	S
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7	8	9	10	11	12	13
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21	22	23	24	25	26	27
28	29	30	31			

3rd: Pub Exploration of Software Testing
London (<http://pest-global.org>)

10th: SIGiST Conference
London (www.sigist.org.uk)