March 2017

Specialist Group in Software Testing

THE TESTER

SIGiST Spring Conference
Tuesday 14th March 2017

60

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From the Editor

Welcome to the ***SIGiST*** and ***The Tester***. You will more than likely be reading this after our Leeds "***Northern Lights***" conference, which was a sold-out event! Missed it? Look out for our Manchester conference in October. The SIGiST Spring conference is almost upon us, and once again we have a plenary workshop, between two great keynote presentations. Come along for a highly interactive workshop from international-renowned speaker Fiona Charles.

The SIGiST committee would like to thank the sponsors for our Leeds event Bugfinders and NHS Digital, and for our London event Test Partners, Ten10 and Planit Testing.

Ever thought about speaking at a Testing Conference? Well, now you can. We are again running our Mentoring for New and Improving Speakers, after its success in 2016. Closing date for applications is 31st March.

In the rest of ***The Tester***, read some interesting articles covering topics from testing less, conflict and acceptance testing.

Phill Isles
The Tester Editor
phill.isles@bcs.org

Conference Booking Instructions

To register online, please use the link below, or scan the QR code with your smart device. Please note the BCS booking system accepts multiple and third party bookings.

https://events.bcs.org/book/2363/

Join our Linked-In Group:

http://www.linkedin.com/groups?mostPopular=&gid=3466623

Follow us @SIGiST

Conference Agenda

BCS SIGiST – Spring 2017 Conference – Tuesday 14th March 2017
BCS 1st Floor, Davidson Building, 5 Southampton Street, London. WC2E 7HA.

Thinking about testing: how do we do what we do?

Time	Session
09:25	***Welcome – Stuart Reid, Chair, SIGiST***
09:30	Keynote ***Help! I'm only human! Understanding and supporting the human tester*** Dr Mark Micallef and Dr Chris Porter, University of Malta.
10:30	*Networking Session – Stephen Hill, Social Media Secretary, SIGiST*
10:45	Coffee, Tea & Refreshments
Morning	**Workshop**
11:15	***Plenary workshop*** **Test Heuristics** Fiona Charles Quality Intelligence, Canada
13:00	Lunch in networking area **Videos or Vendor presentations in small workshop room** Test Partners, Ten10
Afternoon	**Workshop continues**
14:00	***Plenary workshop*** **Test Heuristics** Fiona Charles Quality Intelligence, Canada
15:30	Coffee, Tea & Refreshments
16:00	*Keynote* ***Thinking about Test Management….*** Geoff Thompson, Planit Testing
17:00	***Close - Stuart Reid, Chair, SIGiST***

The SIGiST committee reserves the right to amend the programme if circumstances deem it necessary.

Conference Sponsors

Test Partners

Test Lab & Consultancy Services

Whether you're looking for a turnkey testing service or flexible resourcing to support your own testing team, Test Partners' Consultancy division and Test Lab in central London can provide all the testing resources and facilities you require.

Test Lab

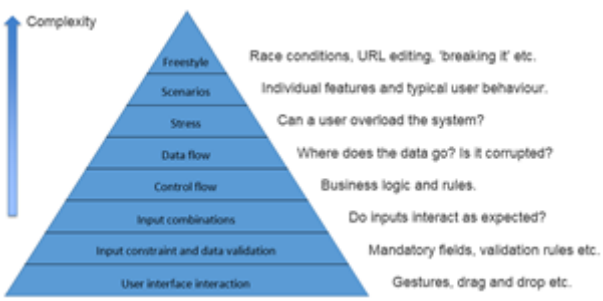
Our Test Lab in central London is designed to respond rapidly to testing requests, efficiently handling projects lasting from a few hours to many years.
We can support any development methodology, from waterfall to agile and can ramp the team size up and down as required.

Exploratory Testing

Since 2001 we have been the UK's leading exponents of exploratory testing and have developed a unique approach that is far more efficient and effective than scripted testing.



From our "building blocks" to our 8-layer testing model, everything we do is driven by the context of each project, to maximise efficiency.



Consultancy

Our Consultancy division supplies experienced test resources and proven processes to provide you with information about the quality of your software via on-site services including:

- Test Process Review / Health Check
- Strategy and Planning
- Test Management
- Test Analysis, Script Development and Execution
- Test Automation & Regression Testing

Compatibility Testing

- Our comprehensive Compatibility Testing Lab facilities include a wide range of Windows and Mac hardware and software to enable testing on every end-user environment you could want.
- Every Microsoft and Apple operating system and service pack since 1995.
- Every version of popular browsers such as Internet Explorer, Firefox, Safari, Opera and Google Chrome.
- Every version of major plug-ins such as Flash Player, Shockwave, Adobe Reader, Windows Media Player, .Net Framework etc.
- Nearly 100 mobile devices.

Accessibility Testing

We offer a comprehensive range of accessibility testing and consultancy services to support development projects from concept through to launch and maintenance.

- Concept review
- Wireframe review
- Creative design review
- Template (WCAG) testing
- Expert review with assistive technologies
- Final (WCAG) testing
- User testing with disabled participants
- Automated testing

BS8878 Accessibility Governance



Our BS8878 governance programme is ideal for clients wanting to achieve and maintain the highest level of website accessibility.



Accessibility Training

- JAWS Screen Reader Training
- WCAG Testing Training
- Accessibility Training for Project Managers

UX Lab Hire

Situated in the centre of the City of London, our purpose built user testing study lab and observation room are available for hire.





The study lab has a top-end PC with microphones and cameras, while the observation room is a comfortable environment in which to watch the testing.

London Open Device Lab

The Open Device Lab is a free facility for testers and developers to come and test the layout and behaviour of their mobile apps and websites on all our mobile devices.



We've got about 90 phones and tablets including all the popular Apple, Samsung and Google Nexus models. To make a booking, please email odl@testpartners.co.uk

Find us on Procurement Portals

G-Cloud
www.digitalmarketplace.service.gov.uk/g-cloud/search?q="Test+Partners+Ltd"

Ariba
discovery.ariba.com/profile/AN01011471333

www.testpartners.co.uk
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Visit our stand at the SIGiST conference
Tuesday 14th March 2017

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http://www.ten10.com/

Conference Sponsors



https://www.planittesting.com/uk

SIGiST Conference Venue

The March 2017 SIGiST conference will be held at the BCS London office. Travel details and location below.

London office guide

How to get to the BCS London office

First Floor
The Davidson Building
5 Southampton Street
London WC2E 7HA

Telephone 01793 417666

These area and inset maps have been simplified in the interests of ease of understanding. Not all roads are shown. The inset map below is more accurate.

Access by car is very difficult due to the local one-way system. There are no car parking facilities at BCS London. The nearest car park is located on Drury lane, Parker Street, Parker Mews, London, WC2B 5NT.

The rear door in Exeter Street is to be used for deliveries only and is normally locked.

The main entrance is fully accessible to wheelchair users and should be used by all staff and visitors.

On arrival, report to the Davidson Building Reception who will direct you to the first floor.







Travel tips from major London stations

Charing Cross – 6 minutes walk

Waterloo – 12 minutes walk across Waterloo Bridge, or buses 139 or 176 to Stop Ⓒ

London Bridge – onward rail link to Charing Cross

Kings Cross or St Pancras – Piccadilly Line to Covent Garden tube, or bus 91 to Stop Ⓑ

Euston – West End Branch of Northern Line to Charing Cross, or bus 91 to Stop Ⓑ

Victoria (rail and coach stations) – Circle Line to Embankment, but the most direct journey is via bus 11 to Stop Ⓐ

Paddington – Circle Line to Embankment or Temple, Bakerloo Line to Charing Cross or buses 15 or 23 to Stop Ⓐ

Liverpool St – Circle Line to Embankment or Temple, or buses 11 or 23 westbound

Fenchurch St – Walk to Tower Hill, then District or Circle to Embankment

Presentation Abstracts and Speaker Biographies

Opening Keynote

Mark Micallef and Chris Porter, University of Malta

Help! I'm only human! Understanding and supporting the human tester

Software testing is an intensely human activity that aims to improve the user experience for the end users. As systems become increasingly complex, the task of uncovering faults before deployment becomes much harder, leading to a phenomenon amongst software testers known as information anxiety - stress caused by the inability to access, understand, or make use of information necessary for employees to do their job. Software testers are particularly susceptible to this phenomenon because they operate in a highly voluminous context of continuously changing information. The typical software tester needs to be knowledgeable about software testing techniques, the domain of the system which they are testing, current features, stakeholder priorities, outstanding bugs, timelines, processes and regulations, to name a few. This can quickly lead to the tester feeling lost and/or burnt out, leading to a direct effect on the quality of the end product.

In this talk, we will take the audience on a journey through a number of research projects in which we utilise human computer interaction techniques and technologies to form a deeper understanding of the human tester and subsequently use that information to help support them in their day to day jobs. We will discuss ways to understand what strategies are being used by exploratory testers, whether they are in a state of anxiety, whether they think a system is behaving as expected, what information they need and how we can present it to them just in time and in innovative ways so as to minimize cognitive workload and improve overall performance.

***Chris** is a Lecturer with the Computer Information Systems department at the University of Malta's ICT Faculty. In 2015 he completed his PhD at University College London, following an MSc and BSc in 2008 and 2005 respectively from the University of Malta. His research interests lie in the area of human factors and information security, with particular emphasis on the measurement of potential user reactions to design decisions within the requirements development process. His research has been mainly applied in the public sector, particularly in the design of public facing and enrolment-centric e-services.*

***Mark** is a lecturer at the University of Malta, has a Ph.D. in Software Engineering, founder of the PEST Research Lab where he is active in software testing research, and regularly consults for international companies on software testing and process improvement. He has a passion for software testing with over 15 years of industry experience and has a number of publications to his name in the field.*

In March 2016, Mark, Chris and their team came to the BCS SIGiST and the SIGiST attendees were some of the research subjects for this work.
Come to the March 2017 SIGiST to hear some of the results gathered in 2016.

Closing Keynote



Geoff Thompson, Planit Testing

Thinking about Test Management….

Thinking about test management, is not easy and in most cases it isn't something that comes naturally. But, in my experience, every Test Manager has the opportunity to turn each project they work on into a work of quality. The skill of test management is not in creating Gannt charts and producing regular reports, it is in how you work with your team and within the project team as a whole.

The success of a Test Manager is mostly down to thinking about and applying the softer skills needed to negotiate, motivate and influence the test team and all stakeholders.

This presentation will look at how you recognize skills in your team and what roles they play, as well as looking at how the use of negotiation, motivation and influencing skills form a significant part of a test manager's thinking skills and a project's success.

We will review the role of a test manager in projects today where they could be working across many different development approaches, and look at how understanding your team's capabilities is key to success. In the world of Agile and DevOps it has never been more important to ensure your team work together, possibly across continents, and are motivated to deliver their best for the project.

***Geoff** is the UK Director of Testing Services for Planit Testing, part of the global Planit Testing group. He has a real passion for software testing, test management and process improvement.*

He is a founder member of the International Software Testing Qualification Board (ISTQB), the TMMi Foundation, and the UK Testing Board and is currently the Secretary of the ISTQB and Chairman of the UK Testing Board.

He co-authored the BCS book Software Testing - An ISEB/ISTQB foundation and is a recognized international speaker, keynoting in many conferences, and was the chair of EuroSTAR 2011.

Geoff is Vice Chairman of the SIGiST and its Treasurer.

In 2008 Geoff was awarded the European Testing Excellence Award, and in 2015 he was awarded the Software Testing European Lifetime Achievement award.

Plenary Workshop!



Fiona Charles

Test Heuristics

Variously defined as “fallible methods for solving problems” (Bach & Bolton) or “rules of thumb”, heuristics are essential tools for thinking test practitioners. When you construct a test around a model like “follow the money”, or adopt a leadership pattern where you challenge your team members with stretch goals, you are working with a heuristic. In each case, the model may be applicable and useful in some contexts, and irrelevant or even detrimental in others.

One of the keys to using heuristics successfully is to do so consciously. If you aren’t aware that you are operating with a heuristic model, it can become an unchallenged assumption. But if you consciously use a model as a heuristic, then you are in a better position to see its weaknesses and potential failure points in a given situation.

In this workshop, we will explore the use of heuristics in problem solving and software testing. Working in groups, participants will have opportunities to design heuristics to solve particular problems, apply them to problem solutions, then critique their models and share their conclusions with other groups.

The session will be highly interactive, consisting principally of problem-solving exercises and debriefs. Conscious use of heuristics requires both creativity and critical thinking skills. Come prepared to practice and extend yours!

Fiona Charles *teaches organizations to manage their software testing risk, and IT practitioners project skills “beyond process”—hands-on practical skills essential to thrive and excel on any kind of software project. An expert test consultant and manager, she has been immersed in the action through 30+ years of challenging projects across the business spectrum on both sides of the Atlantic. Throughout her career, Fiona has advocated, designed, implemented and taught pragmatic and humane practices to deliver software worth having. Fiona publishes articles and blog posts, and she conducts experiential workshops at international conferences and in-house for clients. She is the co-founder (with Anne-Marie Charrett), of Speak Easy, a volunteer organization whose goal is to increase gender diversity and help new speakers find their voices at tech conferences. Contact Fiona via her website www.quality-intelligence.com,and follow her on twitter @FionaCCharles.*

BCS SIGiST Mentoring:
New and Improving Speakers 2017

Never been a speaker at a conference but you have a story to tell?

Spoken at events once or twice and now want to improve your presentations?

Loads of testing experience but never presented to your peers?

Think you have a more interesting story to tell than the ones we have told you?

The BCS SIGiST can help you become a speaker.

During 2017, we are offering up to 4 new or improving speakers the chance to speak at a conference. Two of the new speakers will take part in the September SIGiST, when the theme for the day is Growing your testing skills: Increasing our capability as testers. The other two take part in the December SIGiST when the theme is "Take a Risk". We want you to tell us a compelling story about testing: what it means to you, how you do it, something important you have learned, a war story about a project, or a skill / knowledge that we could learn from you.

If you are a successful applicant for this scheme, you will:

- be mentored by one of four world class testing experts and speakers who will:
    - advise how to make an appealing abstract to submit
    - guide you in preparing your submission
    - explain the presenting technology
    - review and help you rehearse your presentation
    - introduce you when you speak at the BCS SIGiST conference in London
- present a 20 to 25 minute talk at the BCS SIGiST on 14th September 2017 or 1st December 2017

How do I apply? There is an application form on the BCS SIGiST website.

What we are looking for at this stage is **your idea** for a presentation.

Write that in the abstract. Then fill in the key points you wish to highlight.

These don't need to be perfect yet.

When do I need to do this? NOW! The deadline is **31st March 2017**.

BCS SIGiST Mentoring

The mentors for 2017

Stuart Reid

http://www.stureid.info/



Rosie Sherry

http://www.softwaretestingclub.com/profile/rosiesherry



Steve Watson

https://uk.linkedin.com/in/sjwatsonuk



Gordon Thompson

https://uk.linkedin.com/in/gordonthompson



What is the process the SIGiST will use to select the successful applicants? The Programme Secretary and Mentors will review the applications, select four and assign each one to a Mentor. An announcement will be made at the **end of March** of who has been successful.

What happens then? If you are successful in your application, you will provide an improved abstract submission **by the end of July 2017**, and a presentation **in September or December 2017**. Your mentor will provide advice, review comments and discuss your ideas with you, but you are responsible for content and delivery. Some of you will also have a chance to take part in a short workshop from renowned speaker Antony Marcano before the SIGiST or a short workshop with the Evil Tester himself, Alan Richardson on the day of the SIGiST.

I'm not based in London; can you help me with travel? Ask your company to pay your expenses as part of your professional development. If that is not possible, discuss with the Programme Secretary as we pay expenses in some circumstances.

When and where is the conference? Thursday 14th September 2017 or Friday 1st December 2017, at the BCS Offices, Davidson Building 5 Southampton Street London WC2E 7HA.

"Increase your capabilities"

"Take a risk!"

My experiences of the BCS SIGiST Mentoring scheme

Andrew Shaw BSc MBCS

I have been developing a career in software testing, and enjoying gaining experiences in different types of software testing like Automated Testing, Manual Testing and Exploratory Testing. I also wanted to develop myself as a professional public speaker and saw the BCS SIGiST Mentoring Scheme, which started for the first-time last year, as a great opportunity to further develop myself in delivering professional presentations and learning from a world class mentor on how I can be a better public speaker.

I decided to focus on the challenges I had encountered undertaking Automated Testing and what I had learned from the experience that I could pass to other testers. After discovering I was accepted onto the scheme, I was both really delighted and nervous about delivering my talk at the SIGiST conference in December because I was going to be mentored by a world class speaker, Dot Graham. Dot has also mentored other software testing public speakers in the past who have become world class speakers, so I wanted to work really hard to ensure my presentation was the best that I could possibly deliver.

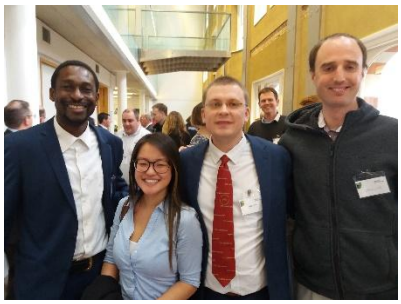
Whilst I was being mentored by Dot, I gained experience of identifying the key points that I wanted to deliver to a targeted audience, using good examples of the testing that I had undertaken to help my audience identify how specific software I was testing was being tested, and improving presentations which flowed consistently. I also rehearsed my presentation to Dot both face-to-face and via Skype and received constructive feedback on the areas of the presentation which were strong, and advice and encouragement on areas that could be developed.

Dot also recommended that I practiced my presentation to different audiences, to gain further experience. Therefore, I arranged with my connections, friends and family about delivering my presentation to different groups so I could improve my presentation in preparation for the SIGiST Conference in December. Delivering my presentation to different networking groups, family and friends increased my confidence and from each rehearsal I delivered I gained some really constructive feedback which helped me improve.

Whilst I was being mentored, Dot gave me a book that she co-authored, which gave real life examples of automation tests undertaken in different companies, and an insight into how the SIGiST conference was structured, to help further prepare me when I delivered my presentation. From her guidance I also gained further insights into how to develop automated tests for software and web based systems, as I was interested in developing experience in this area of software testing.

During the SIGiST Conference, delivering my presentation about the challenges I faced undertaking automated testing was a privilege and such a great experience. I also enjoyed listening to the presentations of the other mentees who were on the scheme and learning from each of their presentations how I could improve myself as a software tester.

During and after the presentation, I received praise and encouraging feedback from the audience who listened to my presentation, and was encouraged to deliver further presentations at future conferences, which was really touching. My presentation was also videoed on the day, so I could show it to my family and friends, who were proud of me.



The SIGiST mentoring scheme was fantastic and a great way for software testing professionals who wish to develop experience of public speaking, because the mentors on the scheme are inspiring and pass on a wealth of experience to help their mentees to further develop as speakers. Being mentored by Dot was a fantastic experience which I really enjoyed, and I would happily do it all again. Her guidance, encouragement, and ideas on how I could develop as a public speaker, has helped me improve as a public speaker and I plan to deliver more presentations in the future to different conferences.



Andy Shaw *is a Software Testing Professional, gaining experience in software development, software support, focusing on a career in Software Testing. He graduated from Sheffield Hallam University and has worked in different companies including Total Systems Plc, EDS, Hewlitt-Packard, Schlumberger and currently works as a software tester in DBIS.*

He is actively involved with the British Computer Society, mentoring professionals embarking on a career in the IT Industry, including students, young professionals, women and people with disabilities, and is a Young Professionals Group representative and the Vice-Chair of the South Yorkshire BCS branch.

He continually develops his knowledge and experience of software testing, the IT industry and the different industries he has tested software for, including Defence, Geology and the Cargo and Shipping Industries.

Andy was in the first group of mentees on the SIGiST New and Improving Speakers mentoring programme 2016.

SIGiST White Paper Scheme

We have set up an area on the BCS website of a searchable repository for white papers and articles on testing and we are looking for contributors. That means you!

Do you have an existing paper you would like to repurpose and make more widely available through the SIGiST website?

- Then please send us the paper with three keywords for searching.

Would you like to write a new paper?

- Please send us the title and abstract together with the three keywords (or phrases)
- We will review the proposal and guide you through the authoring process
- For those who are thinking of speaking at SIGiST then this might be a good way to prepare a talk and get some useful feedback

If you have been thinking of writing or publicising an existing paper then this is the ideal opportunity. Please email your existing paper (with keywords) or your proposal to The Tester Editor, phill.isles@bcs.org

Past articles from The Tester will slowly be added to the repository as well.

Follow this link to the repository: http://www.bcs.org/category/18128

Write an article

We are always on the lookout for new content, so if you have a testing story you would like to share, a test technique you would like to evangelise or testing research you would like to publish, then The Tester is the place to do it. Simply email the Editor on phill.isles@bcs.org

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BCS West Yorkshire and BCS Specialist Group in Software Testing Proudly present the Leeds "Northern Lights" Conference Thursday 9th February 2017

In association with the BCS West Yorkshire Branch, the SIGiST is bringing its successful full day conference programme to the Leeds Marriott, on Thursday 9th February 2017.

Conference Programme

Time	Topic, Speaker, Affiliation
08:30	Coffee, registration and informal networking
09:00	Welcome from **Stephen Allott**, BCS SIGIST committee
09:15	A not-so Unexpected Journey: end to end Healthcare Testing, **Monica Jones**, MD Animo
10:15	The 4th Industrial Revolution and Smarter Testing, **Dr Stuart Reid**, CTO STA Testing Consulting
11:15	Coffee/tea and networking break
11:45	Agile Testing: Challenges still to be conquered, **Pablo Garcia**, CEO Quality Point, Sweden
12:30	Lunch
13:30	Blunders in test automation, **Dorothy Graham**, Software testing consultant, speaker and author
14:15	Is automating mobile testing pointless? **Thomas Crabtree**, Head of service introduction, Ten10
15:00	Coffee/tea and networking break
15:30	To infinity and beyond . . . **Chris Ambler**, Independent
16:00	Meet the speakers – informal networking and Q&A
17:00	Summary and close, **Stephen Hill**, BCS SIGIST committee

Please note:

Many sessions are designed to be interactive and audience participation is encouraged.

The committee reserves the right to alter the speakers, topics and timings for operational reasons on the day.

Conference Venue

Leeds Marriott Hotel, 4 Trevelyan Square Boar Lane, Leeds, LS16ET.
www.LeedsMarriott.co.uk

Why testing less could improve your software

Martin Mudge,

Co-Founder, BugFinders

In a digital world that's fast-moving and constantly evolving, it's natural to think you should always be doing more. New Smartphones, tablets, browsers and operating systems are being brought to market all the time. This means you should be doing more and more testing to keep up, right?

Not exactly. It's true that you need to keep pace with the rapid, on-going growth in the mobile device market – if you don't, your customer experience will suffer. But that doesn't mean your team should be doing all this testing by yourselves. In fact, it's a better idea to do less testing in-house by sharing the workload with an external testing partner. Here are 4 reasons why:

Avoiding burn-out

You can only push yourself and your team so hard before something has to give. If you try to test on too many devices and spend too many evenings at the office, tester burn-out is inevitable. When this happens, the quality of your work dips, you miss more bugs, and poorer software gets released.

Partnering with an external software testing company lowers your team's workload. As a result, you can maintain a high level of quality internally, while getting out of the office by 6 o'clock.

Freeing up money for development

A growing mobile device market doesn't just keep you working for longer hours – it also drives up the cost of your test lab. Buying in every new Smartphone and tablet that gets released is an expensive practice. It can begin to look even more expensive to senior executives when testing on those new devices doesn't prevent bugs from escaping into the live environment.

Working with an external partner like a Crowdsourced Testing company allows you to scale down your test lab to 10 or 20 key devices. This can free up money for development, allowing for greater innovation and, ultimately, better software.

Spending more time on each device or browser

If you attempt to test your app or website on 20 different devices or browser versions in 5 days, you will rush through each one as fast as possible to get the work done. Just as with any other kind of work, rushing never makes for good quality testing. Critical bugs will be missed, and the whole point of doing the work will be undermined.

Offloading responsibility for some of your work onto a partner can allow you to spend more time testing on the devices and platforms that matter most to your users. For example, you could run test scripts on 10 key Smartphones and have a partner perform wide-ranging Exploratory Testing on many more.

Getting to market quicker

Trying to test your software on hundreds of devices can delay getting to market by weeks at a time. But by partnering with external testing providers – particularly Crowdsourced Testing companies, which can rapidly test on large numbers of devices – you can reduce your time to market to a matter of days.

Getting software to market quicker means more time for other releases and updates. Therefore, your development & testing can become more agile and your apps and websites more innovative.



Leeds Conference Sponsor

BUGFINDERS

BCS SIGiST 2017, your invitation

Isabel Evans, SIGiST Programme Secretary

As well as the February (Leeds) and March (London) SIGiST events we have organised, we have four other conferences planned for 2017:

June 14th, London:	**The 4th Industrial Revolution**
September 14th, London:	**Growing your testing skills: increasing our capabilities as testers**
October 18th, Manchester:	**Northern Lights**
December 1st, London:	**Take a risk!**

We are planning a mix of international and UK speakers for each of these events, and look forward to welcoming you.

Do you want to speak at events?

We still have some speaking slots available for the London and Northern Lights events in 2017. If you want to speak, please apply at http://www.bcs.org/category/10880, or let us know ideas for topics and speakers you'd like to see at the SIGiST.

Do you want to sponsor events?

If your company works in these areas providing tools, software or consultancy / training you might want to sponsor an event, if so please contact Hiedi Homan via http://www.bcs.org/upload/pdf/sigist-vendor-information-sheet.pdf

The SIGiST committee reserves the right to amend the programmes if circumstances deem it necessary. Non-plenary workshops will have limited places.



An Overview of Conflict in Software Engineering Teams

John Karn

Software testing is a team based activity, how team members interact and cooperate with each other has a bearing on whether or not a project can be successfully completed. Several scholars have argued that the social factors of Software Engineering are just as, if not more important than, the technical side of things [1], [2], [3] [4]. This view was reinforced by De Marco and Lister in their magnum opus 'Peopleware' [5], in which they persuasively argued that it was not technology that made companies or projects succeed or fail – it was people.

Conflict is widely believed to be an impediment to successful team working. Conflict has been defined in the Cambridge dictionary as "An active disagreement between people with opposing views or principles" [6], and in the Oxford dictionary as "A serious disagreement or argument, typically a protracted one" [7]. Given these definitions it is not surprising that the common view of conflict is that it is detrimental and should be avoided and if conflict does take place it is seen as a management failure. In order to present a more nuanced view and to differentiate between destructive and positive conflict Jehn went on to identify three distinct forms: task, process and relationship [8].

Task conflict is not inherently problematic. It refers to an awareness of differences and viewpoints pertaining to specific team tasks. Task conflict is positively related to the quality of ideas / innovations, increases constructive debate and prevents group-think. However, too much task conflict can interfere with consensus and the implementation of ideas; excessive levels have been found to lead to emotional exhaustion. Moderate levels are seen to be beneficial, too much or too little can be damaging.

I have observed task conflicts in software engineering teams following both agile and traditional methodologies. In agile teams there was opposition to the pair programming practice of XP, disagreement with the overall methodology and the feeling that one should not be too dogmatic when it comes to adhering to methodological guidelines, and as XP stresses that tests be written before any code some argued that they would prefer to write code first as this kept in line with their previous experiences. In traditional teams task conflicts occurred over doubts expressed over the level of documentation, which programming language to use and what should the level of detail be in design documents.

Process conflict pertains to issues of duty and resource delegation. This relates to issues such as who should do what, how much work should one get and disputes over responsibilities and assignments. Low to moderate levels can be beneficial at the beginning and towards the end of the project; however this form of conflict can also be detrimental. High levels can have a dysfunctional effect on team performance and member satisfaction, and can lead to inconsistencies in task roles and time management issues. Another negative aspect of process conflict is that it can misdirect an issue with a project's process to appear as an issue with individual team member's abilities.

As was the case with task conflicts, I have also observed process conflicts in both agile and traditional teams. In agile teams there were process conflicts over who should arrange meetings and when, and issues with working practices. Some team members preferred to work at home, or through the night, and this did not fit with the agile ethos of co-location and face to face communication. In traditional teams the process conflicts observed revolved around who would produce project documentation and when, who would be responsible for arranging meetings with the client who had commissioned the software, and the responsibility for performing a peer review of project artefacts before they were formally submitted.

The final form relationship conflict is at the forefront of people's thinking when they imagine conflict to be a wholly negative phenomenon. Relationship conflict is destructive; it refers to the perception of interpersonal differences, and focuses more on personalities as opposed to actual issues. This form of conflict should be avoided at all costs as it brings no benefits and reduces team effectiveness.

There were no specific methodology related relationship conflicts. For both agile and traditional teams I have witnessed hair splitting pedantry and sarcasm leading to flashpoints, accusations of people not doing their bit, distrust of project clients, and accusations of lying.

As alluded to above. This piece aims to promote a more nuanced view of conflict by introducing different forms. The widely held belief that conflict is negative by default does not hold true for all instances. To summarize, it is not entirely correct to say that conflict should be avoided at all costs. Conflict can actually be beneficial depending on the form and frequency, and whether the level of conflict is appropriate to the complexity and uncertainty of the task.

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***John** is currently working in the financial sector for Lloyds Bank as a UAT test lead and has previous financial services experience of working as a system tester at Barclays.*

Before embarking upon a career in industry his background was spent primarily in academia, first as a PhD student and then as a post-doctoral researcher. His research focused on human factors of software engineering and one of the areas of interest was conflict in teams. He completed MPhil and PhD degrees at the University of Sheffield as part of the Verification and Testing research group working closely in collaboration with the Institute of Work Psychology.

He has presented work at Empirical Software Engineering conferences such as EASE (Empirical Assessment in Software Engineering) and ISESE (International Symposium on Empirical Software Engineering), as well as internally for research colleagues.

He has software testing experience in both industry and academia and knowledge of the theory and research carried out which focuses on conflict in teams.

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Three Pillars of Acceptance

James Brodie

As a consultant I have been asked to work across a number of different industries and work within a number of different methodologies. One of the constants across all of these variables is the need for User Acceptance Testing (UAT). I have however found that working with multiple clients that the definition of UAT can vary greatly.

ISTQB defines UAT as:

"Acceptance testing carried out by future users in a (simulated) operational environment focusing on user requirements and needs."

My rather simplistic definition is:

"Ensuring that the system under test meets the needs of the user as required."

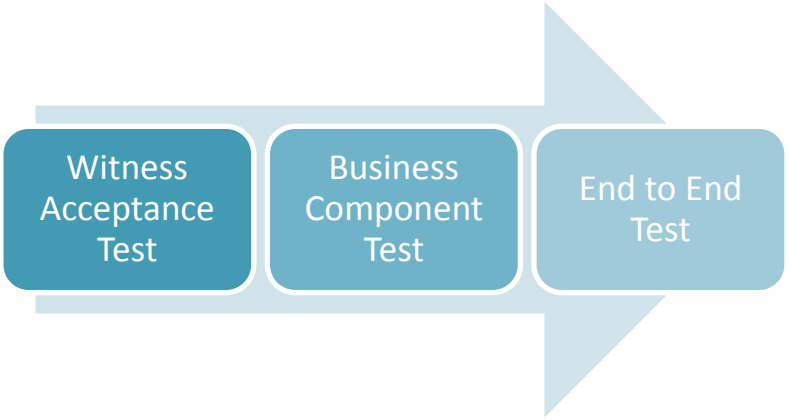
I found that especially in an Agile environment that UAT was being bolted on as part of the sprint and was concentrating on the business components rather than looking at the end to end business journeys. I felt that what is being called UAT wasn't actually encompassing what was being tested, it wasn't what the client needed and it was creating a bottleneck in the Agile process.

A common theme I also observed was that often the client would be working with development third parties and there would be a lack of confidence in the output being delivered. This would undermine the test process before it even began.

Working initially with one of my retail clients I recommended that we expand what was being called User Acceptant Test to Acceptance Test and then to call out the different elements that we are looking to accept.

Acceptance Test would then complement the existing system testing which was being performed by the suppliers and clients own test teams.

The three pillars of acceptance are shown in the diagram below.



Witness Acceptance Testing

- The third party supplier is responsible for the functional testing of their internal solution. The expectation is that the third party supplier will provide the client with a list of what has and hasn't been tested.
- The third party supplier will then provide the End to End Test Manager with artefacts that will demonstrate that the component has been tested.
- The artefacts will include an agreed subset of scripts as well documentation that can be 'witnessed'. This acts as the acceptance test into Business Component and End to End Testing.

Business Component Testing

- This is the acceptance testing of singular business functionality. (Typically this is what the client will describe as UAT)
- The output of this is to identify functionality that will be tested end to end as part of UAT.

User Acceptant Testing

- This is traditional end to end UAT.
- Confirming that the solution under test meets the needs of the user as required.

The purpose of this approach is that it is building business confidence for the system under test.

Witness Acceptance Test has the advantage that it can be used as part of the entry criteria into test, but it gives the business the tools to ask development (internal or external) to evidence the quality of the testing that has already been undertaken and it stops development from simply throwing code over the fence to make sure it hits a deadline rather than providing a quality deliverable.

Business Component Test mirrors System Test but from a business perspective. Within an Agile environment it is checking that the end of the sprint deliverable meets the need of the user.

By identifying the first two pillars for Acceptance Test it meant that User Acceptance Test would concentrate on the end to end solution and I also found that this helps to focus the mind of the client to specifically call out that they are looking at the complete picture.

As ever with an acceptance based approach, one of the key factors is ensuring that you have the right people in the test roles. A tester assigned to acceptance test must have a business background and I would recommend that where ever possible the business ring-fences their acceptance test team. This means the team gains experience as they work and it will help with future training as well.



James has been a test professional for eighteen years working for a wide range of companies and consultancies covering a broad range of sectors. As a Senior Test Engagement Lead James recently took the decision to form his own company Testbox Guru Ltd and now works as contract test senior professional.

Event Listings

If you would like your event listed here, please contact the Editor phill.isles@bcs.org

2017

February

SIGiST and BCS West Yorkshire Branch "Northern Lights"
9 February 2017
Leeds, UK
http://www.bcs.org/category/9264
http://www.bcs.org/category/14985

UKSTAR
27 – 28 February 2017
London, UK
https://ukstar.eurostarsoftwaretesting.com/

March

SIGiST
14 March 2017
London, UK
http://www.bcs.org/category/9264

May

STAREAST
7 - 12 May 2017
Orlando, US
https://stareast.techwell.com/

June

SIGiST
14 June 2017
London, UK
http://www.bcs.org/category/9264

September

SIGiST
14 September 2017
London, UK
http://www.bcs.org/category/9264

October

STARWEST
1 - 6 October 2017
Anaheim,, US
https://starwest.techwell.com/

SIGiST
"Northern Lights"
18 October 2017
Manchester, UK
http://www.bcs.org/category/9264

November

EuroSTAR
6 – 9 November 2017
Copenhagen, Denmark
https://conference.eurostarsoftwaretesting.com/

Agile Testing Days
13 – 17 November 2017
Potsdam / Berlin, Germany
http://www.agiletestingdays.com/

December

SIGiST
1 December 2017
London, UK
http://www.bcs.org/category/9264



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