December 2015

Specialist Group in Software Testing

THE TESTER

SIGiST Winter Conference Wednesday 2nd December 2015

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IN THIS ISSUE

From the Editor

Welcome to the last edition of The Tester for 2015.

Our programme secretary has done a great job again organising a thrilling programme for the SIGiST on Wednesday 2nd December. Subjects covered include Test Automation and Tester skills - including skills for Test Management and Programme Test Management. Opening with Mark Fewster, and closing with Graham Thomas - don't miss both these keynotes. The workshop in December is back by popular demand, on "Defect Measurement and Analysis", presented by the UK Software Metrics Association. Places are limited so sign up now!

Check out the articles in this edition of The Tester. One on Webdriver integration with JMeter, and one on User Experience (UX) certification.

We are always looking for speakers / workshops for the conference, and articles for The Tester. If you want to speak check out the SIG website: http://www.bcs.org/category/10880 or contact me if you want to become a published author.

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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/1407/

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Conference Agenda

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“How Healthy is Your Test Automation?”</td></tr>
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“Key attributes and responsibilities of a Test Manager”</td></tr>
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<tr><td>13:50</td><td>Quick Talk - Damon Rands, Wolfberry
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Part 2 13:50 to 15:30</td></tr>
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“Software Localisation and Software Localisation Testing: An Overview and Case Study”</td></tr>
<tr><td>14:40</td><td>Changover</td></tr>
<tr><td>14:45</td><td>Prakash Iijra, HCL
“Digitisation of a test organisation”</td></tr>
<tr><td>15:30</td><td colspan="2">Coffee , Tea & Refreshments</td></tr>
<tr><td>16:00</td><td colspan="2">Keynote
Graham Thomas
“Becoming a programme test manager”</td></tr>
<tr><td>17:00</td><td colspan="2">Close - Stuart Reid, Chair, SIGiST</td></tr>
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The SIGiST committee reserves the right to amend the programme if circumstances deem it necessary.
Workshops will have limited places.

SIGiST Conference Venue

For the last conference of 2015, the SIGiST returns to 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 Fewster,
Grove Consultants

"How Healthy is Your Test Automation?"

Are you benefiting from test automation? Are you sure this will continue? Do you worry that your automated testing will falter and fail? Find out what the signs are of test automation that is destined to go wrong. Learn to distinguish between automation that is healthy and automation that has problems. If you already know your test automation is not in tip top form, discover some of the most common reasons for poor automation health and pick up ideas for what can be done to combat them.

In this presentation, Mark will offer a fitness regime for test automation, identifying some key ideas to help restore ailing test automation to good health and to keep it there well into the future. There will also be some advice for how to bring test automation back from the undead!

Three key points:

- Assess the health of your test automation.
- Identify good and bad habits.
- Develop a fitness regime to keep your test automation healthy.

***Mark** has over 30 years of industrial experience in software testing ranging from test management to test techniques and test automation. In the last two decades Mark has provided consultancy and training in software testing, published papers and co-authored two books with Dorothy Graham, "Software Test Automation" and "Experiences of Test Automation". He has spoken at numerous national and international conferences and seminars, and has won the Mercury BTO Innovation in Quality Award.*
Mark has served on the committee of the British Computer Society's Specialist Interest Group in Software Testing (BCS SIGiST) and on the Information Systems Examination Board (ISEB). He is currently helping ISTQB define specialist certification for test automation.

Closing Keynote

Graham Thomas, Independent Consultant Practitioner

"Becoming a Program Test Manager"

After working for a while as a successful test manager the next forward step to take is into program test management. Many think a Program Test Manager is just some super test manager, or in a lot of cases, a 'shouty' test manager. In fact it isn't. You are transitioning into an oversight role, where others do the testing, and you are setting the direction, giving guidance, and having oversight.

This is quite a step up and suddenly requires a set of skills that successful test management does not develop. The scale has changed, you may be looking after multiple projects and multiple teams. You are now operating at the organisational level, working with other members of the program management team.

In this session we will look at a range of newly required skills; Leadership, Accountability and Responsibility, Oversight and Awareness, Stakeholder Management, Communication, Influencing and Negotiation. We will work through some useful models so that you can take away a kitbag of tools and techniques to use back in the office. We will also look at how to stay relevant to the testing operation, and retain value-add for your role whilst now working at the organisational level, and delivering through others.

And even if you aren't working as a Program Test Manager yet, the skills and techniques we look at in this session will be invaluable today, to start using, developing and refining.

Three key points:

- Tools and techniques for successful program test management.
- Useful models for influencing and negotiating.
- How to add value and stay relevant whilst performing a 'delivery through others' role.

***Graham** first learnt to program at college in 1978, worked as a developer through the 1980s, until in 1992 when he took his first steps in software testing. He has diverse IT and testing experience from end users and consultancies, in the public sector, retail, finance, banking, insurance and treasury. He now works as a program test manager or implementing testing change.*

Track Session

Dave Oxley, Intel

"Top Trumps – My skill is better than yours!"

How many times have you heard something like 'I'm better than you at that so leave the task for when I'm free', or 'I don't know that as well as you so I'll leave it for you'? These comments result in broken engineering teams and reduce the velocity at which the team work. So what do you do to overcome these problems as a tester?

Three key points:

- Give it a go – what's the worst that can happen?
- Share knowledge and skills as much as possible.
- Step on toes if that will help your team.

***Dave** is a Quality & Security Champion for Intel Security. It's a wonderful job of talking to people around the world on a regular basis, occasionally being forced to get on a plane and meet face to face. The focus is on ensuring each release is of a higher quality than the previous one through improving engineering working practices. Part of the process involves coaching teams as they move to Agile.*

Track Session

Chris Comey

"Key attributes & responsibilities of a Test Manager"

The elements required to make a successful Test Manager are many and varied. You move from a testing role to a management role. You might still be doing some testing, but it is likely you will be focusing on planning, monitoring, controlling and reporting on testing. There are new aspects to your work required such as analysis, scoping and planning skills, communication skills and the ability to manage your team and stakeholder expectations. For a Test Manager, leadership, people management skills, motivation and issue resolution are essential. You have to consider many factors that may vary with context such as team location and culture, industry sector, deadlines and available resources, external change or regulatory change. Quite a lot to think about!

You need to understand the fundamentals of testing but as a Test Manager you must be prepared to shape the less 'standard' areas of the work in order to integrate with the particular situation in which you find yourself. Create and publish your plan within that context and prepare in advance for change and the need to adjust the plan as information becomes available or circumstances change.

This presentation will discuss the attributes, experience and awareness that a Test Manager needs to possess in order to succeed. Most of all it is when things are going wrong that a good test manager makes a key contribution to keep everyone calm, objective and focussed.

Three key points:

- The activities, attributes and experience required to be a "good" Test Manager who "keeps it real" will be presented for consideration.
- The key testing activities that require test management will be highlighted and discussed.
- The importance of tracking and reporting key information and managing stakeholder's expectations, especially what is needed when things "go wrong" will be discussed.

***Chris** has been testing for 34 years during which time he has performed roles from Test Analyst through to Test Consultant and Trainer. With 15 years in total spent in the Test Manager role, Chris has spent the last 8 years managing test teams in the finance and legal sector and was recognised in 2013 winning the UKTB Test Manager of the Year at the TESTA awards ceremony. Having presented and conducted workshops at several testing conferences over the years, including EuroSTAR on 3 occasions, Chris is an experienced presenter who knows what the key aspects of test management are, and the importance of being 'ready' for disruption in all aspects of the process.*

Workshop

Kristina Rungano Masuwa-Morgan, UKSMA

"Defect Measurement and Analysis"

Back by popular demand!

The aims of the workshop are to:

- Promote defects measurement as part of UKSMA's mission of promoting software metrics and measurement.
- Familiarise the software community with UKSMA's "Defect Measurement and Analysis Handbook".
- Engage with the professional community on the priorities for defect measurement.

This workshop and the UKSMA Defect Measurement and Analysis Handbook offer a unique opportunity to explore strategies and techniques for managing software defects and dealing with their impact on delivery costs and schedules especially in relation to contractual obligations. It covers defect measurement at the various stages of the Software Life Cycle and the Defect Life Cycle and explores the relative efficacy of different quantitative and qualitative measurement techniques and models. It also provides an opportunity for delegates to share experiences and challenges of using some of the contemporary defect logging and measurement tools and provides opportunity to explore together the essential requirements of a defect log for effective measurement and control.

Three key points:

- Measurement and Analysis of defects.
- Defect logs, and Defect logging and measurement tools.
- Contractual and cost issues for defect measurement.

Dr Masuwa-Morgan *is on the UK Software Metrics Association (UKSMA) board and is also the Faculty Director of Learning, Teaching and Assessment (FDLT) at Canterbury Christ Church University. She has had the privilege of working in the Computing industry since the 80s, as Operations Manager and then as an analyst/programmer, logistics manager and then software manager before joining Higher Education as a lecturer in Computer Science, Digital Marketing, Digital Business, Business Information Systems and Information Systems/eBusiness strategy and leadership.*

She has programmed and taught a host of programming languages including old school languages like COBOL, FORTRAN, PASCAL and so on right up to modern OO platforms such as Java, C and now mainly web development platforms and scripting languages. Her specialist interest areas are in human factors aspects of computing which she sees as key facets of Quality control. She has published and developed work in the area of accessibility requirements management. Her interest in developing tangible usability measurements resulted in her joining the UKSMA which shares the goal of promoting and improving software measurement and metrics within the software community.

Dr Masuwa-Morgan has also worked as Faculty Quality Officer, and Technology Enhanced Learning and Teaching Co-Ordinator. This, in addition to her work as Faculty Director for Learning and Teaching, gives her great insights into metrics and Quality Assurance. She also continues to provide consultancy services mainly in the areas of accessibility, web development and IS strategy. She is also a creative writer (published under the name Kristina Rungano) and she pairs this with her work in Computer Science by making links between literature, especially poetry, and Knowledge Management.

Quick Talks

Damon Rands, Wolfberry

"Digital foot printing - Building an attack"

Almost everyone at one time or another has been guilty of sharing too much information: from job specifications to social media the explicit and implicit trail left behind provides a wealth of valuable information. Understanding how to best protect your clients' intellectual property during testing and the impact of your online activity is essential in today's world.

Three key points:

- Understanding the impact of your company's digital footprint.
- How an attack is built and deployed.
- How to mitigate the threat by testing and during testing.

***Damon** is an experienced cyber security expert, with over 25 years working in the Information technology industry. Having worked in development, support and installation, he has helped companies across the United Kingdom build secure systems and implement best practises in order to protect their intellectual property and private information. He specialises in:*

- *Digital Foot Print analysis.*
- *Pen Testing.*
- *Business Continuity.*
- *Cyber Essentials Certification.*
- *IASME Certification.*
- *Security Awareness Training*

Mark Rice

"Software Localisation and Software Localisation Testing: An Overview and Case Study"

This paper explores the high-level processes of software localisation and software localisation testing, in addition to discussing the importance of these processes and some of the challenges facing the industry today. While software localisation occurs for many forms of software, the motif of this paper is video games, and my experiences as a software tester and project manager inform the article.

Three key points:

- Software localisation and software localisation testing are vital concepts, particularly for video games.
- Numerous challenges face software localisation and software localisation testing, many of which were not present in the Golden Age of video games, such as social media criticism.
- In particular, there is a lack of software localisation testing certification.

***Mark** is a functional & localisation software tester and project administrator. He has previously worked for the Release Management, Localisation Services and Creative Services departments of his organisation and is currently seconded to the Business Operations department. Mark has a PhD in psychology and is qualified in Advanced ISTQB (Test Manager/Agile), Scrum, ITIL, PRINCE2, TMMi and 6 Sigma. He also volunteers as a glossary reviewer for the ISTQB.*

Track Session

Prakash Ijral, HCL

"Digitization of a testing practice"

Without most of us taking notice, our world has gradually been digitalized during the last 20 years. Digital products and services can be found in almost all areas of our life. Executives in all industries are using digital advances such as analytics, mobility, social media and smart embedded devices – and improving their use of traditional technologies such as ERP – to change customer relationships, internal processes, and value propositions. A very interesting aspect is also how companies are seeing new options in the way they interact with customers and develop and release products while they are empowered by constant connectivity, the rise of social networks, and an increasing amount of software in products. They are speeding up cycle times and shortening learning curves by testing new products or ideas with consumers using mock-ups, computer-generated virtual products, and simulations. This paper explores the significance for organizations to excel in the digital industrial economy in order to become more technologically capable and sophisticated and also the changed role testing specifically test automation will play in the era of digitalization.

Key highlights of our research paper include:

- Why digitalization should be taken seriously? – Consumer, Businesses, Information Technology and Testing viewpoints included.
- Changing testing role in Digital Era.
- Analysis around key market forces for QA decision makers to consider.
- Study on how radical shifts in market forces (SMAC , IoT , 3D printing , E commerce and user experience) translate to radical shifts in business models. It also covers the key components of an appropriate testing innovation strategy that ties in with the corporate vision and company capabilities and helps in determining the best ways of fostering and sustaining organic innovation.
- Suggested long term and short term strategy.

We believe the audience will gain a perspective of how a testing organization (People, technology and Tools) require meeting the customer digital needs. As organizations move from non-digital or digital to a "REBORN digital "phase due to the huge demand from customer end, testing functions need to tighten their seat belts to enable themselves to help deliver world class services.

***Prakash** is responsible for defining and implementing the TCoE roadmap across the organization and has over 17 years' extensive experience of working globally and implementing Centres of Excellence (Test Factory) across multiple clients in USA and Europe. Expertise in spearheading complex Software Testing Projects and played roles of Consultant/Test Architect for various Global Operation Centre's and for many Clients in the USA, Europe and ANZ Geo. He possesses extensive Software development and testing experience spanning across Energy Utility, Manufacturing, Financial Risk Management, Retail, CRM, Business Intelligence, Health Care, Publication, Vendor Management and Data centre management areas. Prakash is trained at IIM Bangalore on Leadership and an Engineering graduate in Electronics and Telecommunications with Post Graduate Diploma in Advance Software Design and Development. He is a Microsoft Certified Solution Developer and has also played the role of Defect Prevention Council Head for HCL's CMMI5 initiative.*

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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Webdriver integration with JMeter for simulating browser based virtual users

Praveena Sridhar, Parikshit Chakraborty & Dinesh Kaarthick,
SSF-Engineering Cisco Systems

Abstract

This is an automation framework developed using Google's Webdriver and JMeter to do Load testing of complex AJAX applications. The framework has been designed using JMeter's abstract implementation - AbstractJavaSamplerClient. This framework leverages page object model of Webdriver based automation framework for feeding JMeter to solve the performance benchmarking of AJAX based applications.

We have many tools to perform server side performance testing, like Loadrunner, SilkPerformer, NeoLoad, *etc*., some of which also provides options for client side performance testing. But, the choice is very limited for open source tools to perform client side performance testing. This paper aims to explain one such tool which helps in enabling a client side performance testing for modern day complex web applications.

Index Terms - JMeter, Performance testing, Webdriver, AbstractJavaSamplerClient.

I. INTRODUCTION

API stands for Application Programming Interface which specifies how one component should interact with other. It consists of a set of routines, protocols and tools for building the software applications. The API Testing is performed for the system, which has a collection of API that ought to be tested.

1.1 Problems

1. Traditional open source tools for Load testing can't handle complex Web2.0 features like AJAX.

2. No open source solutions available to handle real browser based load testing.

3. JMeter aggregates the response time for the HTTP calls and doesn't differentiate the sequential vs parallel calls made using AJAX.

4. Multiple browser based load testing not possible through open source tools.

5. The parameterized inputs for JMeter are static per test execution.

1.2 Solution

1. Since Webdriver based test framework classes are being invoked the AJAX based HTTP requests are taken care of from browser, for the AJAX calls depending on the application and use cases, custom Webdriver API can be called to confirm that the responses related to AJAX have been addressed for parallel calls response calculation.

2. Since it is Webdriver based load tests we can have multiple browsers across virtual users during the execution.

3. JMeter agents will just leverage the executables / class files of Webdriver based framework on the hub.

4. The TestNG framework integrated with Webdriver based automation framework gives the ability to parameterize the inputs for the performance calls on a method to method basis at runtime.

5. JavaSamplerClient interface defines the interactions between JavaSampler and any external java program that is to be executed.

6. Implement the runTest() method of JavaSamplerClient to pass the inputs from JMeter to Webdriver scripts and invoke the scripts.

7. The Webdriver based scripts are invoked sequentially in the order of the execution of a test case.

1.3 Example Test case:

- LoginPage.login()
- LandingPage.action_1 ()
- LandingPage.action_2()
- FunctionalPage1.action_1()
- FunctionalPage2.action_2()
- LogoutPage.logout;()

The order of the test execution can be ensured by passing the Session ID / Browser handler to the next page object method call in the test case.

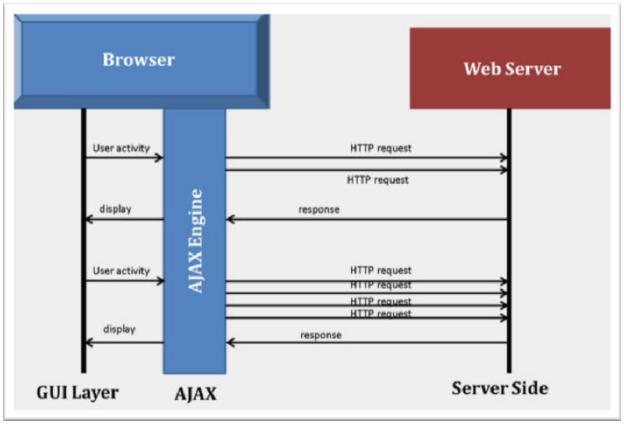
1.4 Example Webdriver Grid2 - JMeter Integration

```
public class InvokeWebdriver extends
AbstractJavaSamplerClient implements Serializable
{

@Override
public Arguments getDefaultParameters() {
        Arguments params = new Arguments();
        return params;
}

private void listParameters(JavaSamplerContext
context)
{
String name;
for (Iterator argsIt =
context.getParameterNamesIterator();
argsIt.hasNext();
System.out.println(name + "=" +
context.getParameter(name)))
{
        name = (String) argsIt.next();
}
}

public void setupTest(JavaSamplerContext
                context)
{
}
public void teardownTest(JavaSamplerContext
        context)
{
}

@Override
public SampleResult runTest(JavaSamplerContext
context)
{
        SampleResult results = new SampleResult();

        //Invoke Webdriver Classs here

        return results;
}
}
```

- Once the Integration code is written it has to be converted into a Jar file and then placed inside the $JMETER_HOME/lib/ext directory.

- Now we can open JMeter and a Thread Group - Java Sampler and choose the InvokeWebdriver class from the dropdown.

II. AJAX BASED WEB APPLICATION



In the traditional web application the communication between the browser and the server happens directly and whenever the user requests for a page the server responds with the actual data. Whereas in AJAX based applications the AJAX Engine acts as an intermediary and takes care of the communication with the server in the background and the user is displayed with the available content. Also there can be multiple calls going to the server at the same time. In this scenario JMeter will invoke those requests sequentially and also show the aggregated response time for those calls. By combining the Webdriver scripts with JMeter we can get the real-time response time since the browsers by default handle the asynchronous / parallel calls.

II. FRAMEWORK IN NUT-SHELL

1. Parameterization

- By using the Java Sampler to integrate Webdriver scripts all the variables from JMeter script such as No. of Threads, Username, File inputs etc. can be passed on to the Webdriver script.
- By using the Webdriver TestNG based data provider we can parameterize the attributes per method execution.

2. Invocation

The various actions that are performed in a web page have a corresponding method associated in the Webdriver class and a separate JMeter custom sampler can be created for each action.

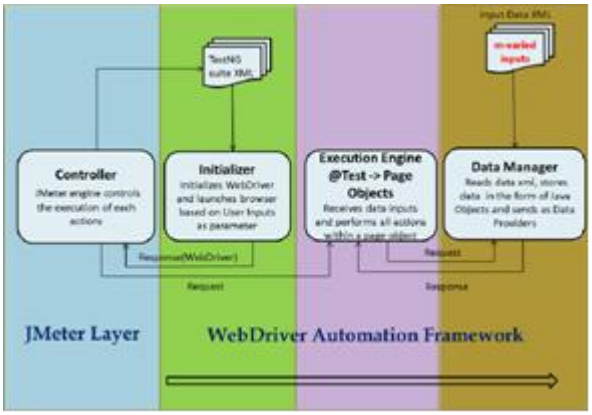
3. Response Assertion

Custom Webdriver API have to written to ensure that the page is completely loaded to take care of the AJAX response assertion.

4. Results

Results calculation can be easily performed because the browser takes care of the AJAX requests and we will be able to calibrate performance data per method in a page

5. Framework Architecture



6. Advantages of the Webdriver & JMeter Integration:

- The benefit of using Webdriver automation scripts in JMeter is that it provides the ability to utilize the same scripts for Load testing.

- Using this approach we can easily integrate the Functional & Performance test tools, which is Webdriver with JMeter.
- Load test results can project the real end user browsing experience by taking the browser rendering time also into account.

REFERENCES

[1] http://www.tutorialspoint.com/software_testing_dictionary/performance_testing.htm

[2] https://www.safaribooksonline.com/library/view/selenium-testing-tools/9781849515740/ch08.html

Praveena Sridhar (Quality Champion and Security Advocate)
SSF-Engineering Cisco Systems, SAN JOSE, United States
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With 16 yrs experience in S/w Testing across companies like Microsoft/BEA/BMC/Intuit/Cisco Systems. Expertise in domains of automation frameworks development in UI, API and security testing. Expertise in performance testing , High Availability testing and E2E tests for large scale enterprise environments. Presented papers in next gen testing conferences in Kerala and Sri Lanka, Bilboa-Spain, Brussels-Belgium, New York. Qualification: Bachelor of Engg from BITS-PILANI India and Software Engg Course from Stanford Palo Alto, Pursuing Advanced computer Security Certification from Stanford.

Parikshit Chakraborty (Tata Consultancy Services @ Cisco)
SSF-Engineering Cisco Systems, Bangalore, India
parichak@cisco.com

Have over 7 years of experience in software testing across companies like PointCross, Ciber Inc., GT Nexus and Tata Consultancy Services. Have expertise in the domains of automation frameworks development in UI, API and E2E tests for large scale enterprise environments. Have expertise in tool development for automating security testing. Presented papers at Next Gen Testing Conferences, India Chapter at Trivandrum, Kerala and SriLanka Chapter at Colombo. Apart from that white papers got selected for conferences at Bilbao-Spain, ICTSS 2015 New York. Also, got best white paper award at BTD 2015 conference at Brussels-Belgium. Like to pursue anything around automation and framework development. Also, like to learn new trends and technologies and would like to work on new tools, if any, around automation.

Dinesh Kaarthick (Performance Test Lead)
SSF-Engineering Cisco Systems, Bangalore, India
dkaarthi@cisco.com

Have almost 12 years of experience in development and testing projects across companies like Tata Consultancy Services, Cisco Systems. Have expertise in the domain of software performance testing using tools like HP Loadrunner, JMeter *etc*. Have expertise in software project development using Java. I am very passionate about Performance engineering and an aspiring Performance Architect and wanted to do large scale computer performance design, analysis, and tuning.

Why I changed my mind about UX Certification

David Travis, Userfocus ltd

I'll admit it: when I used to hear people advocate professional certification in user experience, I was dismissive. Since we can't even agree on what "UX" is, how can we certify it? I wondered. I saw certification as a way of creating a closed shop to exclude dissenting voices. This is the story of why I changed my mind.

The arguments against certification

I found the "closed shop" argument a persuasive one. Did I want an elite squadron of user experience professionals defining user experience to be the narrow area of work that they did day-to-day? And how would this select cadre decide if someone was suitable to join their club: a multiple choice test couldn't possibly demonstrate the real-world expertise that people need to carry out user experience work. I was concerned that certification was simply a scheme — some might even say a scam — drawn up by training companies to boost delegates.

Back in July last year, I attended a panel held at the UXPA Annual Conference in London where they discussed this very issue. Nothing I heard changed my mind. In fact, I became more convinced of my view. A comment from one of the panellists at that meeting resonated with me. The panellist said that job candidates who put vendor-based UX certifications on their CV are automatically excluded from interview in his firm — because including the certification demonstrates their **lack** of knowledge, not its presence.

Since that time, four events changed my mind.

The arguments for certification

First, I worked with a client that asked for certification. This client (part of a large Government department) wanted to train and develop some of its employees so that they could do fundamental user experience activities, like user research and usability testing. I pointed out that they could achieve this without certification — but for this organisation, certification mattered. This is because the organisation saw certification as establishing a development path for employees and specifying a minimum level of competence. In fact, the organisation was astonished that there was no industry-wide scheme in place, since certification schemes exist in many other areas of IT, such as in business analysis.

Second, I realised that we need more foot soldiers. Without a certification scheme, we fall back on a secret society where only people who have worked in the field for many years know the conventions, language and culture of user experience. This creates a barrier to entry for novices — and simultaneously creates a culture where we laud “rock star” UX designers who know the secret handshake. But right now, looking at the state of product design, UX rock stars aren’t sufficient. If they were, there wouldn’t be so many poor user interfaces around. What the user experience field needs is more foot soldiers: people whose role is simply to convince their project teams to focus on users and their tasks, design iteratively and run usability tests. If more development teams worked that way, we would transform the lives of ordinary people — our users — overnight.

Third, whether or not I think certification is a good idea is irrelevant. The genie is out of the bottle. I run some online courses on UX that have around 6000 students and on a daily basis I receive emails from students asking about certification. I see students discussing the merits of the different vendor-based certification schemes and deciding to take one or other exam. However, as much as I respect the various training organisations that offer these certificates, it can’t be a good idea for the organisation that does the training to also be the organisation that does the certifying. There is an obvious conflict of interest which needs to be addressed, even if the genie is out of the bottle.

The fourth and final part of the jigsaw for me was realising that the argument, “We don’t know what UX is, so how can we certify it?” is nonsense. It’s true that there are many conflicting viewpoints about good practice in user experience. But we have a standard — ISO 9241-210 — that has been debated and assembled by a team of international experts and that sets out the fundamental competencies of our field. Standards, especially International Standards, provide independent and authoritative guidance. The discipline of having to achieve consensus to create an international standard helps moderate some of the wilder claims of user experience enthusiasts and helps ensure that the resulting standard represents good practice.

Towards an independent UX certification scheme

So I’m delighted that since having my road to Damascus moment, I've been working with BCS — a well respected, independent certifying organisation — to create a suitable scheme. Although still in its beta phase, there will be two levels of certification: Foundation and Practitioner.

The Foundation certificate aims to create more foot soldiers who speak the language of user experience. Because the syllabus is based around the ISO 9241-210 standard, we can be sure the certificate encapsulates best practice. To pass, candidates will need to take a 1-hour multiple choice examination. The good news is that you do not need to attend a training course to take the examination because certification has at last been decoupled from training providers.

The Practitioner certificate will be partly examination based and partly based on a portfolio review. This certificate sets a much higher bar than the Foundation certificate. Since UX

professionals are now accustomed to submitting a portfolio as part of their job application process, it shouldn't take a great deal of extra effort to apply for Practitioner certification as part of the business-as-usual process of updating a portfolio. What differentiates this process for Practitioner certification is that candidates can't simply regurgitate what they learn on a course: a portfolio demands evidence of real-world practice.

My hope is that, with a heavyweight organisation like BCS behind it, we may at last end up with a UX certification scheme to be proud of. If you want to obtain the certificate, or train people to take the certificate in UX, you can register your interest in the scheme at the BCS web site.

Dr. David Travis (@userfocus on Twitter) holds a BSc and a PhD in Psychology and he is a Chartered Psychologist. He has worked in the fields of human factors, usability and user experience since 1989 and has published two books on usability. David helps both large firms and start ups connect with their customers and bring business ideas to market. If you like his articles, you'll love his online user experience training course.

Further details can be found at http://userfocus.co.uk/ and http://uxtraining.net/

This article first appeared on the Userfocus website in May of this year.

15 minutes with ….

Phill Isles of HSBC Private Bank

HSBC Private Bank

JW5 Associates

Jennifer Wheeler of JW5 Associates spent 15 minutes with **Dr Phill Isles**, Head of Testing for HSBC Private Bank (UK), Limited, talking about his career in testing so far.

How did you get into testing in the first place?

Well that's a bit of a long story, where do I start. It was not planned at all. My personal circumstances changed and I needed to find a job close to home. A friend of mine who worked as a management consultant offered to review my CV. His wife worked for a Software Testing Consultancy and mentioned her company were recruiting Testers. I went through quite a rigorous interview process (three interviews and a test) and was then offered a Test Analyst role which was great. Up to this point I had been a scientist working as an Electron Microscopist. (I have a PhD in Clastic Sedimentology!)

What do you think helped you develop your career the most?

My background in science has certainly helped with the analytical approach ("What happens if I do this?"), however I think sitting the ISEB Practitioner exam helped. The company I was working for at the time supported a number of us to attend a training course and sit the exam. Because I passed with Distinction I was invited to apply for a place on the ISEB Software Testing Accreditation panel which was brilliant. I got to meet experienced people in the testing community and as a result got involved in the SIGiST (Specialist Interest Group in Software Testing) community. Being around people with different experiences and sharing knowledge has been very helpful.

I see you have taken the ISEB Foundation and the ISEB Practitioner Certificate in Software Testing. Why did you decide to take these qualifications and do you think having them has helped in your career development and if so in what way?

I sat the Foundation exam because everyone who worked for the first Testing company I joined (Imago QA Ltd) was required to, even the receptionist! I remember I joined the company on the Monday and sat the exam on the Friday! I passed and at that point was a Certified Tester, however I was far from qualified and knew very little. What was really good was that it gave me the language needed to communicate with Testers and other software development people, and so the ability to learn.

The Practitioner exam. I was working for a different company who made some funds available for training and a group of us chose to do the Practitioner. We had formal training from an accredited provider but we also organised our own discussion sessions to review sections of the syllabus. I found the training and exam very helpful from a hands-on testing perspective, introducing me to many more testing approaches and methods.

In the Software Testing industry, there is a continual discussion for and against certification, I am definitely in the 'for' camp. However certification doesn't make you a qualified tester in my opinion, it is just a good place to start.

You have worked in software testing for 15 years. What advice would you offer people at the beginning of their testing careers who are keen to travel down a similar path from 'hands on' Testing to Test Management?

Don't just work for one organisation. Also, get out and go to conferences and events to hear different views; speak with people who have different experiences of testing and swap ideas. Some companies are restricted in their testing processes. If you go to events and pick up just one or two small ideas to help make improvements back in the office, then it was worth going.

Getting away from the day job and hearing people speak from very different organisations and companies can give a fresh perspective.

Staying up to date with new approaches to testing, tools *etc*. can be a full time job in itself. How do you stay in touch with what is happening in the market without getting swamped?

There is a lot of information and content on the web, so as well as going to events and conferences you can take part in webinars which are often free. Some conferences live stream their keynote speakers. If your company wont fund you to attend or allow you to take three / four days 'off' for a conference, look out for the free streamed presentations. There is a lot out there, so picking well is key. Perhaps start by picking high profile speakers from a range of testing industries, including traditional testing and Agile topics.

It may be helpful to set a target of attending one conference a quarter and taking part in one webinar every two months or so.

Communal Testing blogs are also a good source of information, such as LinkedIn. I find individual blogs can be restricted in topics covered.

You have been the Test Manager at HSBC Private Bank since 2007, can you tell us a little about your role and key responsibilities?

I must start by saying I am not a licensed spokesperson for HSBC so everything in this article is my personal view. I manage the testing of all the applications used by the UK Private Bank. This means I am responsible for everything from Test Policy to methods and approaches used.

How has your approach to testing at HSBC changed since you joined the company 8 years ago?

When I first joined IT projects followed the HSBC Group approach (to an extent) and I took over with the same remit. I am now encouraging more flexibility and changing the Testing approach to meet the context of the work being undertaken. I guess you could say our projects are Tested with a context driven approach, using both traditional and Agile methods.

What plans do you have to change anything around testing?

As I mentioned HSBC Group has a fairly fixed process regarding testing. I am actively involved with the in-house Testing community though and try and make changes where I can.

It is not easy or a quick process to get a consensus to change across such a large group. However we are making inroads towards improving testing practices. Pilot projects on various approaches are a useful way to see if a new approach or tool will be beneficial.

What do you most enjoy about heading up a testing practice?

The variety and scale of work is really interesting. One day we will be testing a single Word template for a specific letter, and the next we may be putting a new CRM system through its paces. Covering one organisation means there are lots of different applications to work on, and I find the variety stimulating because they can all harbour different types of errors.

Working in a Private Bank is interesting by itself. We don't see any client data, but we have to test with large numbers which I find fascinating. For example, when testing systems that deal with foreign currency exchanges, we have to enter large numbers. So, years ago when I caused a system to fail because I entered 99,999,999.99 into a numerical field and the developer said "don't be silly, no one will ever enter such a large number", they actually might in the Private Bank world.

Is there any other advice you would pass on to the testing community?

Volunteer for a role somewhere within the industry.

I have been going to conferences and events for years and recently I thought it was about time I started giving something back. With the help and encouragement of a good friend I have now presented at a number of conferences. The advice I would give people is although you might not be ready to present straight away, it is really helpful to start making notes on things you experience in your work. Maybe a project you worked on where you learnt something new about testing; a good story about something which went well or testing tools you evaluated; a new approach you tried that went well or not so well. People are very interested to hear about the good, the bad and the ugly of Testing! Keeping a log is both helpful to yourself and also may be useful to others if you choose to present in the future.

For more information on writing an article for The Tester or presenting at a SIGiST conference, please contact Phill at phill.isles@bcs.org

For help and assistance in any aspect of Testing career planning or recruitment please contact Jennifer Wheeler at Jennifer@JW5.co.uk or call on 07733 121897

JW5 Associates

Event Listings

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

2015

November

EuroSTAR
2 – 5 November 2015
Maastricht, Netherlands
http://www.eurostarconferences.com/

Agile Testing Days
9 – 12 November 2015
Potsdam / Berlin, Germany
http://www.agiletestingdays.com/

December

SIGiST
2 December 2015
London, UK
http://www.bcs.org/server.php?show=nav.9264

2016

March

SIGiST
15 March 2016
London, UK
http://www.bcs.org/server.php?show=nav.9264

May

STAREAST
1 - 6 May 2016
Orlando, US
http://stareast.techwell.com/

June

Belgium Testing Days
13 – 16 June 2016
Brussels, Belgium
http://btdconf.com/

SIGiST
9 June 2016
London, UK
http://www.bcs.org/server.php?show=nav.9264

September

SIGiST
15 September 2016
London, UK
http://www.bcs.org/server.php?show=nav.9264

STARWEST
TBC 2016
Anaheim, US
http://starwest.techwell.com/

December

SIGiST
7 December 2016
London, UK
http://www.bcs.org/server.php?show=nav.9264

Did you get your Personal Development Plan email with suggested potential CPD activities?

The BCS Personal Development Plan (PDP) uptake is going well, with thousands of registered users already actively recording their CPD Development Goals, Activities and preferences. It's not just about recording details though, as there is a Resources section that shows live feeds of potential CPD activities, and a tailored email is sent every 2 months with details of the latest videos, articles, blogs, books and research in your specified field of interest. If you haven't registered yet, you can see the content from the latest PDP bulletin for topics relating to solution development and implementation here http://www.bcs.org/content/ConWebDoc/50854 or by going to the CPD Portal at: http://www.bcs.org/pdp/.

The BCS Personal Development Plan is free to use; BCS members can use their Member Secure Area login and password to access it at https://pdp.bcs.org/, and non-members can use most of the facilities (using the same link) and registering to create their own user name and password. You can use it on a PC / laptop or compatible tablet PC or smartphone.