Special Interest Group in Software Testing

28 August 2012
Sydney
Facilitators: Leanne Howard & Steve Toms
Agenda

Welcome - Leanne Howard

ANZTB update - Steve Toms

Advanced Syllabus Update by Steve Toms

Networking

Discussion: “What are the skills and competencies of a Professional Tester?”

Close - Leanne Howard
ANZTB’s Mission Statement

• The ANZTB offers sought after certification, dependable training accreditation and career-enhancing support for software testing professionals throughout Australia and New Zealand.

• The ANZTB will exclusively adopt the qualifications of the ISTQB in its national qualifications.
Certified Testers in Australia & New Zealand
Certified Advanced Testers in Australia and New Zealand
ANZTB

- Support the development of syllabi
- Conference
- Participate in ISTQB international working parties
- Accreditation of Training Providers
- Create & run exams

SIGiSTs
Conference

- SIGiSTs
- Support the development of syllabi
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ANZTB
<table>
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<th>ANZTB Test 2013</th>
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<td>ANZTB’s 2012 International Conference was held on 7 March in Wellington to a sell-out audience.</td>
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<tr>
<td>Our 2013 Conference will be held in Canberra. Keep an eye out for dates and programme announcements or sign up to our RSS feed or mailing list to be kept up to date.</td>
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Exams are written in:
- Wellington
- Auckland

In 2013 this will expand to:
- Brisbane
- Perth
- Melbourne
Guest Presentation
Advanced Level Syllabus Changes

By: Steve Toms
No Change to Overall Scheme
What has changed in v2012?

- v2007 had 1 syllabi - now there are 3
- Course Duration has changed from 5 days for each to:
  - Test Manager (5 days)
  - Test Analyst (4 days)
  - Technical Test Analyst (3 days)
## Changes from 2007 to 2012

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Business Outcomes Now Form the Basis for the Advanced syllabi

- Each Business Outcome provides a statement of what can be expected from a person who achieves the Advanced Level in the particular subject area, (e.g. an Advanced Test Manager). The Business Outcomes are listed in the Advanced Level Overview document.

- Business Outcomes are specifically directed to the business needs of industry and will particularly benefit businesses who are considering investing in developing the skills of their staff at the Advanced level.
Business Outcomes For Advanced Test Managers

An Advanced Test Manager can…

- TM1 Manage a testing project by implementing the mission, goals and testing processes established for the testing organization.
- TM2 Organize and lead risk identification and risk analysis sessions and use the results of such sessions for test estimation, planning, monitoring and control.
- TM3 Create and implement test plans consistent with organizational policies and test strategies.
- TM4 Continuously monitor and control the test activities to achieve project objectives.
- TM5 Assess and report relevant and timely test status to project stakeholders.
- TM6 Identify skills and resource gaps in their test team and participate in sourcing adequate resources.
- TM7 Identify and plan necessary skills development within their test team.
- TM8 Propose a business case for test activities which outlines the costs and benefits expected.
- TM9 Ensure proper communication within the test team and with others.
Business Outcomes For Advanced Test Analysts

An Advanced Test Analyst can...

- **TA1** Perform the appropriate testing activities based on the software development lifecycle being used.
- **TA2** Determine the proper prioritization of the testing activities based on the information provided by the risk analysis.
- **TA3** Select and apply appropriate testing techniques to ensure that tests provide an adequate level of confidence, based on defined coverage criteria.
- **TA4** Provide the appropriate level of documentation relevant to the testing activities.
- **TA5** Determine the appropriate types of functional testing to be performed.
- **TA6** Assume responsibility for the usability testing for a given project.
- **TA7** Effectively participate in formal and informal reviews with stakeholders, applying knowledge of typical mistakes made in work products.
- **TA8** Design and implement a defect classification scheme.
- **TA9** Apply tools to support an efficient testing process.
Business Outcomes For Advanced Technical Test Analysts

An Advanced Technical Test Analyst can…

- TTA1 Recognize and classify the typical risks associated with the performance, security, reliability, portability and maintainability of software systems.
- TTA2 Create test plans which detail the planning, design and execution of tests for mitigating performance, security, reliability, portability and maintainability risks.
- TTA3 Select and apply appropriate structural design techniques to ensure that tests provide an adequate level of confidence, based on code coverage and design coverage.
- TTA4 Effectively participate in technical reviews with developers and software architects applying knowledge of typical mistakes made in code and architecture.
- TTA5 Recognize risks in code and software architecture and create test plan elements to mitigate those risks through dynamic analysis.
- TTA6 Propose improvements to the security, maintainability and testability of code by applying static analysis.
- TTA7 Outline the costs and benefits to be expected from introducing particular types of test automation.
- TTA8 Select appropriate tools to automate technical testing tasks.
- TTA9 Understand the technical issues and concepts in applying test automation.
Improved Learning Objectives

Learning Objectives have been improved by removing potential misinterpretations and by splitting certain “compound” learning objectives into individual parts.

The following example demonstrates these improvements:

2007 syllabus:
• (K3) Use the algorithms “Control flow analysis”, “Data flow analysis” to verify if code has not any control or data flow anomaly

2012 TTA syllabus:
• TTA-3.2.1 (K3) Use control flow analysis to detect if code has any control flow anomalies
• TTA-3.2.2 (K3) Use data flow analysis to detect if code has any data flow anomalies
Improved Learning Objectives

Learning Objectives are now uniquely numbered and placed at the start of each syllabus chapter, in line with Foundation and Expert Level syllabi.

i.e - Learning Objectives for Testing Process

Section 1.2 Testing in the Software Development Lifecycle
Learning Objective TA-1.2.1 (K2) Explain how and why the timing and level of involvement for the Test Analyst varies when working with different lifecycle models
## Changes to the Test Management Syllabus

- The principal subjects covered remain the same. However, the content has been improved.
- Redundancies with FL have been removed (e.g. reviews) – FL identified the activities, whereas the Advanced Syllabi focuses on the detail specific to each syllabi.
- The Expert Level syllabi “Test Management“ and “Improving the Test Process“ are now available. Scoping and alignment with these syllabi has taken place.
- The defect management chapter is no longer based on IEEE-1044 and focuses more on setting up a defect management lifecycle and using defect data for process improvement.
Changes to the Test Analyst Syllabus

- The major concentration of this syllabus remains on the testing techniques and test process.
- Domain analysis and user stories are new to the specification-based techniques section.
- Content has been significantly revised to align the scope with Foundation, other Advanced Level syllabi and Expert Level Test Automation.
- The Test Management and Tools chapters are relatively short and cover only the specific issues relating to the Test Analyst.
- The defect management chapter is no longer based on IEEE-1044 and focuses more on defect categorization and performing initial root cause analysis of defects.
Changes to the Technical Test Analyst Syllabus

• A significant refocus on the technical aspects of testing has been completed. As a result it is now expected that candidates must be able to read and understand pseudo-code.

• Test Analyst covers Functionality and Usability where Technical Test Analyst covers Security, Reliability, Efficiency (Performance), Maintainability and Portability.
Important Dates

• October 19\textsuperscript{th} 2012
  – Syllabi officially released by ISTQB

• April 19\textsuperscript{th} 2013
  – All Training Material must be accredited and Exams will be compliant with the new Syllabi
Questions
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Networking & Refreshments
Group Discussion
“What are the skills and competencies of a Professional Tester?”

Please share your thoughts

Facilitated by: Leanne Howard
What is going to be your investment in testing resources and tools over the next 12 months?

**Employing certified testing staff**
- Increase: 26%
- Decrease: 7%
- Stay the same: 67%

**Testing training for existing staff**
- Increase: 41%
- Decrease: 8%
- Stay the same: 51%
The following four slides summarise our group discussion (skills and competencies in order discussed not ranked)

A Professional Tester is a person applying methodologies of testing to find defects, to improve quality and ensure adherence to Business Objectives

- Certified to a basic standard
- Want to be a tester
## Competencies

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<th>Integrity (Value)</th>
<th>Attention to detail</th>
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<td>Holistic Approach</td>
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<tr>
<td>Articulate</td>
<td>Creative</td>
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<tr>
<td>Effective Communication</td>
<td>Proactive</td>
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<tr>
<td>Listen</td>
<td>Disciplined</td>
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<td>Facilitation skills</td>
<td>Pragmatic</td>
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<td>People Leadership</td>
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<tr>
<td>Logical</td>
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<td>Think outside the box</td>
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## Skills

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<th>Destructive – test to break</th>
<th>Technical – Fundamentals of programming / sql / modules</th>
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<td>Translate – Business to/from Technical</td>
<td>Test Design – techniques and re-use</td>
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<tr>
<td>Conflict Resolution</td>
<td>Non Functional testing – understand / quality attributes</td>
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<td>Negotiation</td>
<td>Estimation</td>
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<tr>
<td>Risk Analysis</td>
<td>Planning</td>
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<tr>
<td>SME (Business / Application / Domain)</td>
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<td>Automation (at least understanding)</td>
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### Skills cont.

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<th>Reporting – visibility of progress</th>
<th>Negative testing</th>
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<tr>
<td>Able to articulate the benefits of testing / cost of quality</td>
<td>Risk mitigation</td>
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<tr>
<td>Test to find defects (non conformities to business objectives)</td>
<td>Can create “what if” scenarios</td>
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<tr>
<td>Test to ensure confidence</td>
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Specialist Interest Groups

- The aim of our Specialist Interest Groups is to:
  - Discuss White Papers
  - Discuss Technology or Technique changes
  - Share Information
  - Network

SIGiSTs are sponsored by ANZTB and are in no way linked to any particular training provider or third party.
Future SIGiSTs

- Volunteers for facilitation of the next SIGiST?
- Volunteers to submit white papers for presentation and discussion?

The SIGiST cannot succeed without your input.
Any questions?
What did you think of the SIGiST?
Please feel free to Tweet now.

www.anztb.org