Effective Testing in the SLDC

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1 INTRODUCTION
In this tutorial, ‘Effective Testing in the SDLC’ we will endeavor to explain what testing is and why it is so important. The introduction of errors in the SDLC and their impact can be disastrous which is why effective testing is critical to the success of a new or changed system. Although several models representing the SDLC exist, we will discuss the well-known traditional Waterfall and V Models. We will also see how proper reviewing of source documentation can reduce the cost of the test effort and save time as errors are found and corrected earlier.

A brief review of tools available for use within the SDLC will be given and how they assist the test effort.

The Generic Test Process that supports the V Model will be discussed in detail. Although this process can be managed using spreadsheets and word documents, T-Plan Professional, a test process management tool, will be demonstrated to show how effective this process is in practice.

Finally we will consider the entry and exit points for each stage of testing and identify the true quality control points in the V Model.

2 AUDIENCE
This tutorial is intended for those who have an interest in testing and are keen to see how testing models and theories can be practically and effectively applied in industry.

3 SUMMARY OF THE PROCESS
The Generic Test Process has been successfully adopted by many large organisations as diverse as BT Financial Group in Australia, The Bank of England in the UK and Unisys in Malaysia. The process consists of four activities:

- Analyse — “what” to test. Establish the scope of testing and the relative importance of each of those tests. This involves the identification of the Functions to be tested within the system under test and the determination of the specific rules, (the Test Conditions) that must be satisfied for each Function.

- Design — “how” to test. Documenting the stimuli and expected results to demonstrate that the test conditions are being satisfied. At this stage we wish to gain the maximum coverage of test conditions with the minimum amount of test data.

- Schedule — “when” to test. Building a test execution structure, reflecting the sample/selection order for the project.

- Execute & Evaluate - “what happened?”. Recording and management of the testing results.

4 SUMMARY OF THE TOOL
T-Plan Professional

T-Plan Professional is the chosen software testing solution for some of the world’s largest companies, selected because it has been proven to reduce both the cost of testing and the cost of development and maintenance.

T-Plan Professional provides a corporate standard for testing and under audit conditions has been proven to save clients over 30% of their testing costs. [Under Audit Conditions a major project for the Bank of England had to accommodate 36% requirements change and through the use of T-Plan Professional, achieved 33% reduction in testing budget and 27% reduction in testing resource budget.]

T-Plan Professional enables technical and non-technical staff to analyse, plan, design, document and manage the activities of software testing, ensuring that project and company business objectives are met and quality assured.

The tool has been proven efficient, effective and easy to use for:

- The different levels of testing (Unit, Link, System, Integration, Acceptance, etc)
- Supporting various Development Methodologies and Platforms
- Scalability – multi-sized applications
- Industry-specific requirements
T-Plan Professional provides comprehensive progress, exception and impact analysis reports, assisting management in answering the following key questions:

- Is the system ready to go live?
- If we go live now, what are the associated risks?
- What coverage has been achieved in our testing so far?
- What success have we achieved so far?
- How much more is there to do?
- Can I prove the system is really tested?
- What is the impact of change and what must be re-tested?

5 PRESENTER BIOGRAPHY

Graham Davis is a specialist in the implementation of practical testing methods. He is a knowledgeable presenter and has provided consultancy and training for a wide range of companies in the financial and telecommunications industries, focusing on the application of processes to implement business-specific solutions.

6 FURTHER INFORMATION

PlanIT Training Courses
T-Plan Professional Test Process Management Tool Consultancy

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