



The independent software testing specialists

Welcome to IV&V Australia Testing Newsletter

This e-newsletter provides a practitioner's view of how to manage and perform SOFTWARE TESTING in today's world.

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WHAT HAPPENS WHEN TEST PROCEDURES 'AGE'?

Have you ever been in the situation where you've run the same procedures several times and now they are no longer finding defects or they need changing to still be relevant?

Think about it. You've had a software delivery, preceded by weeks of effort in writing your test documents. You test the software and report the bugs. A bug fix release comes eventually, and the relevant test procedures are run again to check the fixes. Then ... there is a wait for another release with extra functionality and possibly more bug fixes. The questions then arise. How much of the old test procedure is still relevant? Is it worth updating?

Here are a few factors that may help you decide on the right answer for you.

- Firstly, always speak with your developers as early as possible before the new release to find out what is changing and what new functionality is expected. This is no guarantee, as you will always get omissions because the developers don't think some changes will affect you, but will help you to scope the task.
- If the same test procedure is run under the same conditions, the same results should be obtained, unless something has changed. So, it can be a good idea to keep some of the "old" test procedures unchanged to run as regression tests.
- If your test procedures are turning up no new defects or they find defects that other test procedures have also uncovered, they are serving no useful purpose (other than as potential regression tests). These need to be either changed to make them effective again or archived.

KEEP THEM, CHANGE THEM OR CAST THEM ASIDE?

If the decision is made to keep the test procedures, what can be done to make them effective again? Consider the following:

- Varying the initial conditions (to try to take the procedures through a different path in the software). To achieve this, you can run the test procedures in a different order.
- Cut down and combine tests. The technique of taking pieces from tests and recombining them in a different way can result in other defects being exposed, because a different set of conditions will apply. For example, if separate tests exist for data being entered, modified, deleted and used, or links are being created, used, modified and deleted, then subsets of these functions can be combined into one short test.
- Change the test data/data inputs to gain better coverage. For example, if high range values have been used in a numerical field, try using low range values or zero. If tests are run at a particular data rate, try the same test at a different data rate or with different parameters.

If the decision is made to cast the test procedures aside, you still need to make sure that all of the application's "key functionality" is covered either by other test procedures or are included in your regression test suite.

TIPS ON PREVENTING AGING

Writing short tests that allow the input data to be varied easily without a lot of maintenance overhead can reduce the aging problem. For example, if you are writing detailed tests procedures, it is better to have a test step read "Enter valid data _____ in the Duration field" rather than "Enter 20 in the Duration field". Tables of data can be used with the tests written to utilise data from that table. Then, in order to change your data set, the table is the only item requiring maintenance. Short tests are easier to maintain should functionality change.

You can also reduce the risk of test steps becoming obsolete or have procedures be less maintenance by writing tests that are not keystroke specific and therefore not dependent on an exact user interface. For example, a test procedure may read "On the Settings menu, select the Time field. Enter 2:00 and press OK." This would become "Set the time to 2 minutes in the future".

CONCLUSION

Schedules and manpower often make test management decisions to let test procedures go hard to justify, particularly when a lot of time and budget have been invested in writing them. Testers should try to balance the need to test effectively against the budgetary concerns of the company/project. Recognising the signs of aging in your test procedures, and taking early action, will reduce the agony of dropping whole sets of tests and allow your test suite to remain effective over time.

Upcoming Courses @ IV&V

We have a range of courses of the coming months in the following locations:

Sydney

- Introduction to Scripting: 21st October 2010
- End to End Software Testing: 8th – 9th December 2010
- Test and Governance: TBA

Canberra

- Introduction to Scripting: 26th October 2010

Melbourne

- End to End Software Testing: 13th - 14th October 2010

For more information on each of these courses feel free to contact us at info@ivvaust.com.au

What is included? All catering (arrival tea/coffee, lunch, morning/afternoon tea), course notes and interactive examples.

Alice's Adventures

Chapter 7 – Doing it at last!

At last the first round of testing is underway. Alice our Test Manager is hovering like a helicopter parent over her team because she has so much invested in this project working out well. They are trying something new here – to buddy the Test and Dev teams so the testers can verify “hidden” functionality. She didn’t want to make her team nervous, or micromanage them, but she knows that careful oversight is critical when attempting to do something differently.

This first release had arrived slightly over schedule and Project Manager Ursula was also nervous. She had stuck her neck out to support Developer Max and Alice in their approach to this project. They all knew that “management” would come down on them all if all the changes they’d made in their approach didn’t make a difference! Everyone associated with a project “Titanic” would be tainted if it foundered on the rocks!

Alice and Max’s team members were buddied up and testing some requirements in development testing and starting to find some issues! Do we log the bugs if they were found “in development”? After some discussion, they agreed that bugs would be raised if they related to those requirements being tested, as this buddied approach was effectively formal testing. There was grumbling about the overhead in doing this, but Max’s team understood the need for recording accurately, and they eventually agreed.

Max’s team then made the fixes and regression testing was undertaken after analysis of the changes. Alice’s team then set about testing the rest of the first release, well pleased with their efforts. They were reaching a point of mutual respect with the Dev team and feeling really proud of what they were jointly doing!

Meanwhile, Alice had a thought... how were they going to prove that this different approach to designing, building and testing the Whizzbang Gadget were leading to a better outcome than if they had struggled on as before? She and Max knew it was working out better, but providing evidence was another matter..... Alice smiled to herself as she recalled an article on metrics, and she made a mental note, as she sipped her coffee and finished another cookie, to look for it again.

Thought of the day

"Testers don't like to break things; they like to dispel the illusion that things work." ~ Kaner, Bach, Pettichord

FEEDBACK

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