Approach to Structured Testing

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Introduction

This paper discusses the challenges and limitations faced during System & Acceptance Testing and how Business Process Testing Methodology can be effectively used. Business Process Testing is one of the modules available in HP's Quality Center product. It is a general misconception that Business Process Testing software is a test automation solution, not intended for manual processes. Business process tests can be created for manual or automated functional testing—and can substantially increase the efficiency of both.

This paper, however, does not discuss the test automation aspects or features of the BPT module.

Testing Challenges

It is a general concern that System & Acceptance Testing more often than not, lack documentation, processes and formal procedures. The challenges vary from documenting the test artifacts, to version controlling, to circulating the same to distributed testing teams across regions. Typical shortcomings are:

- No documented test cases
- No documented test results
- Testing is mostly manual
- Business or end users are generally involved in test design towards the end of development
- No traceability of the test cases back to test requirementsBetter focus of limited IT resources on core business activities
- No single repository for test artifacts like testing requirements, test cases, test reports.
- And so on…

Business Process Testing (BPT) module of HP's Quality Center product addresses some of these drawbacks associated with test design, test execution and test maintenance. This module provides efficiency for manual functional testing as well as automated testing—and to easing the transition from manual to automated testing when that transition makes sense. It helps in optimizing the testing and provides the flexibility to do manual or automated testing.

What is Business Process Testing?

A scenario comprising a serial flow of business components, designed to test a specific business process of an application.

BPT methodology provides an efficient test framework to carry out streamlined testing for non-technical business experts, from test design to test creation to test maintenance and documentation. Main focus is on providing a business-centric testing framework. Some of the salient features are:

- BPT empowers subject matter experts and business analysts who have no coding expertise to quickly build tests for entire business processes. This greatly simplifies and speeds up the test design process, allowing QA/testing teams to start the test design process much sooner—during system design—and accelerate time-to-deployment.
- It also increases the productivity of both subject matter experts and QA teams because it engages them earlier, makes complex tasks simpler, and even helps keep the documentation in synch with current activities.
- Enables Subject Matter Experts to design quality assurance tests for an application early in the development cycle and in a script-free environment

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- BPT is not dependent on the completion of detailed testing scripts
- Applications can be tested manually before automated tests are ready

How Does It Work?

BPT has the concept of re-usable business "components" for test design. Components are simply modules of a business process. Subject matter experts can use components to create a number of user scenarios, validate them and optimize the business process flow—all without ever having to touch any procedural code or keywords. For example, with the BPT approach, there is a component called "log on" that includes all the various user steps in the log on process— launching the application, entering the user name, entering a password and clicking the submit button. The subject matter expert just selects the desired component from a tree-structured list, then drags and drops it onto a BPT software workspace. This construct makes it possible to create data-driven manual test libraries in minutes.

Additionally, subject matter experts can copy and paste components, business process tests, and test sets within HP Quality Center software, so it is possible to leverage testing assets across multiple applications and different testing teams.

Subject matter experts are responsible for creating the manual components, building tests from the components and assigning data and execution of tests. We can take components that are already set up with data and simply automate those components. By developing the components in keyword, we can then pass the maintenance of the scripts back to the subject matter experts. This allows the automation experts to support more teams than they can normally support.

Benefits of BPT Methodology

This approach provides a number of benefits to improve the processes and productivity:

- Helps in planning the test design and test execution well in advance
- Speeds up test execution, if a component or scenario is automated
- Integrates both automated & non-automated components, thus providing a single repository for all test cases
- Test maintenance becomes easier. This is because when you modify a component in one place, that change is replicated to all tests using that component.
- Reduces redundancy if many business processes share common elements or steps; one component can be implemented that can reused across various scenarios

Mindlance Professional Services Offerings

Mindlance offers a full spectrum of consulting services to help you take full advantage of the benefits of Business Process Testing and the Test Automation Services using an integrated Quality Center & QuickTest Professional approach. Wherever you are on the path to Business Process Testing, we can help you take the next step quickly and cost-efficiently.

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