

End-User Acceptance Testing

Duration: 2 Days

Course focus	This seminar covers the basic tools, techniques and terminology of information system testing. The presentation of these topics is non-technical to eliminate the need for any information technology background. The objective is to enable business experts to evaluate whether delivered information technology meets the needs of the business community.
Effective testing	To be effective, testing has to be planned and budgeted at the beginning of your project. This implies test plans supporting a test strategy based on business risks. A test plan encompasses a set of test cases documented in test scripts. Test plans, test cases and test scripts are the components of your testing methodology. You need a consistent approach for developing each component individually and maintaining it as an integral part of your test environment.
Efficient testing	Test data has to be engineered for optimal performance throughout the system life cycle. A minimum number of test cases ensures that the system works in accordance with expectations. You need to identify, define and prioritize test cases from business requirements. Test data engineering lets you compare test cases to limit redundancy and optimize your testing performance.
Course philosophy and approach	<p>The tools and techniques of this 2-day seminar exemplify the following simple philosophies:</p> <ul style="list-style-type: none">a) an information system should be <u>tested at the appropriate level of detail</u> to reduce the risk of exposure caused by a potential failure.b) testing doesn't follow system delivery, <u>it is an integral part of the creative process</u>. <p>Based on the concept that techniques are best understood if they are experienced by the participants, the seminar is built and sequenced around practical exercises.</p>
Target audience	The target audience includes project leaders, business analysts, managers and end-users who are interested in reducing the effort required to deliver usable information technology with a minimum of time investment.
Modular structure	The modular structure of this class allows you to mix and match the subjects that matter most to your organization. Selected modules can be presented as a conventional seminar to a single group or each module can be attended by a different mix of participants. This approach lets participants optimize their time investment by targeting specific techniques to maximize the company's return on its training dollars.

Developed and presented by:

Hathaway & Associates, Inc.
16057 Tampa Palms Blvd. W., # 197
Tampa, FL 33647

"Effective Business Use of Information and Systems"

Telephone: (813) 973-3046
Fax: (813) 864-0131
Email: training@thehathaway.com
Websites: www.thehathaway.com
www.businessanalysisbooks.com

Outline

I Introducing Information System Testing

Duration ≈ 1 hour

The major challenge in testing is finding a balance between the necessity for quality and the need to deliver cost-effective information technology that your business community needs. To meet this challenge, you need to clearly understand both the risk of system failure and the mechanisms by which you can reduce that risk.

1. The purpose of information system testing
2. Major testing activities and deliverables
3. Testing and your system delivery methodology
4. A phased approach to testing

II Initiating an Error Detection Process

Duration ≈ 2 hours

The cost of errors can be greatly minimized via early detection. You need techniques to validate that you are getting the right system and that the system was built right. To ignore testing during the early stages is “penny wise but pound foolish”.

1. Walk-throughs made effective
2. System requirements versus business problems
3. Validating design documents
4. Beware before you leap

III Identifying Test Cases

Duration ≈ 3 hours

Behavioral (a. k. a. “black box”) testing is your primary weapon in the war against errors. It does not require internal knowledge of the technology. All you need to know is how to activate the system and how to interpret the reaction. The real challenge is not how to do black box testing, but how to do it well.

1. Data and process models as a baseline
2. Requirements decomposed for testing
3. Focus on problem areas
4. Behavioral tests designed for success

IV Engineering Test Data

Duration ≈ 3 hours

Careful selection of the value of each field that you can modify will drastically reduce the number of test cases that you need to thoroughly test a system. *Engineered* data gives you a much higher confidence in the reliability of the system without identifying every unique situation that the system might eventually face.

1. Manipulating data interfaces
2. Optimal field value identification
3. Reducing the number of tests needed
4. Payback for test data engineering

V Planning Test Execution

Duration ≈ 2 hours

The test plan is where it all comes together. Defined and documented test cases have to be sequenced, resourced, scheduled and managed. A good test plan lets you identify problems before they occur and allows for proactive adjustments.

1. Initiating and estimating testing
2. Components of test plans
3. Minimize time without sacrificing quality
4. Criteria for selecting appropriate test cases
5. When have you tested enough?

VI Managing Your Test Environment

Duration ≈ 2 hours

Suitable testing practices and methods are the cornerstones of an effective testing environment. Your environment encompasses tools, techniques, technology and training that support a baseline testing strategy based on sound business sense. Each piece has to be tailored to your organization's specific needs. Making all of the pieces fit together is the testing challenge.

1. Environmental influences on systems
2. Regression testing unveiled
3. Effective manual testing techniques
4. Categories of automated testing tools

VII Inflicting Change

Duration ≈ .5 hour

Developing or changing the testing process within an existing organization is a daunting task that requires a defined project with all the implied controls, decisions, support, etc. There may, however, be some things that you can accomplish without redesigning the known universe.

1. High priority aspects for you and your organization
2. What are you going to do about it?

Appendices

- A. Case Study
- B. Index
- C. Bibliography
- D. Evaluation and Name Tent

Objectives

Attend this section:

To be able to:

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| I Introducing Information System Testing | <ul style="list-style-type: none">➤ Evaluate how your organization tests information technology➤ Identify when testing starts and finishes➤ Define common testing terms consistently➤ Understand typical testing phases |
| II Initiating an Error Detection Process | <ul style="list-style-type: none">➤ Prepare and conduct quality assurance walk-throughs➤ Test requirements against business problems➤ Evaluate business requirements for testability➤ Determine how to recognize when testing is finished |
| III Identifying Test Cases | <ul style="list-style-type: none">➤ Read process and data models to identify test cases➤ Define test cases from decomposed requirement statements➤ Extract behavioral test cases from end-user documentation➤ Identify event based test cases using catastrophe analysis techniques |
| IV Engineering Test Data | <ul style="list-style-type: none">➤ Document test actions and expected results in test scripts➤ Engineer test data using equivalence groups➤ Minimize test cases with boundary value analysis➤ Optimize data content to facilitate test case comparison |
| V Planning Test Execution | <ul style="list-style-type: none">➤ Create test plans to manage risk and reduce exposure➤ Calculate the effort required for testing based on metrics➤ Identify resources required for specific testing activities➤ Assemble test cases into test plans |
| VI Managing Your Testing Environment | <ul style="list-style-type: none">➤ List various types of testing tools and describe their use➤ Establish the need for release, version and configuration tests➤ Prepare for stress, volume and usability testing➤ Define a regression test environment suitable for your organization |
| VII Inflicting Change | <ul style="list-style-type: none">➤ Identify ways to implement a testing strategy in your environment➤ Adapt a testing approach to your organization's needs |