

Reviewing Requirements and Design Adequacy

Course Summary

Description

Most organizations do not know how to assure that requirements and design are accurate and complete. At best, they use one or two weak methods which are insufficient to help prevent costly rework and up to two-thirds of the errors which traditionally plague finished systems. This unique seminar workshop shows numerous ways to static test up-front, where payoffs are greatest. Applying the techniques successively to a real case, participants discover that each review technique reveals additional, otherwise-overlooked defects; and finding more important issues also improves meaningful customer involvement and communication.

Objectives

At the end of this course, students will be able to:

- Use more than 21 static testing ways to review business requirements and 15 ways to review designs.
- Find previously overlooked problems when they are easiest and least expensive to fix.
- Evaluate the levels of quality embodied within the requirements and design.
- Review techniques that enhance customers' involvement and communication with management.
- Prevent future difficulties related to product ability, maintainability, and usability.
- Manage the review process and allocating resources economically.

Topics

- Value of (Static) Testing Up-Front
- Reviewing Requirements Formats
- Finding Overlooked Requirements
- Assuring Accuracy/Completeness
- Evaluating Financial Indicators
- Reviewing Design Suitability
- Actively Testing Design Accuracy
- Managing the Review Process

Audience

This course has been designed for systems and business managers, project leaders, analysts, programmer analysts, quality/testing professionals, and auditors responsible for assuring the accuracy and completeness of requirements and/or designs.

Prerequisites

There are no prerequisites required for this course.

Duration

Two days

Due to the nature of this material, this document refers to numerous hardware and software products by their trade names. References to other companies and their products are for informational purposes only, and all trademarks are the properties of their respective companies. It is not the intent of ProTech Professional Technical Services, Inc. to use any of these names generically

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Course Outline

- I. Value of (Static) Testing Up-Front**
 - A. Error sources; economics of quality
 - B. Survey on improving requirements quality
 - C. Keys to effective testing
 - D. Why up-front testing usually is so weak
 - E. CAT-Scan Approach™ secret to quality
- II. Reviewing Requirements Formats**
 - A. Hidden weaknesses of traditional methods
 - B. Adding strength to subjective evaluations
 - C. Making sure they *are* requirements
 - D. Assessing reviewability
 - E. Determining deliverability
 - F. Judging structural completeness and clarity
- III. Finding Overlooked Requirements**
 - A. Identifying all the stakeholders
 - B. Detecting all three Quality Dimensions
 - C. Addressing relevant quality factors
 - D. Commonly overlooked sources
- IV. Assuring Accuracy/Completeness**
 - A. Finding Engineered Deliverable Quality™
 - B. Checking importance and criticality
 - C. Ascertaining trade-off balances
 - D. Matching to independent definitions
 - E. Defining acceptance criteria
 - F. Working out implications in action
 - G. Simulation and prototyping
 - H. Standards, guidelines, and conventions
 - I. Independent/expert validation
- V. Evaluating Financial Indicators**
 - A. Relation to requirements/design adequacy
 - B. Feasibility vs. justification
 - C. Assessing reliability of cost/benefit estimates
- VI. Reviewing Design Suitability**
 - A. Calculating internal design quality metrics
 - B. Structured English, Cause-Effect Graphing
 - C. Checklists/guidelines for judgments
 - D. Conformance to engineering standards
 - E. Web and O-O considerations
 - F. Enlisting meaningful customer cooperation
 - G. Evaluating designs competitively
- VII. Actively Testing Design Accuracy**
 - A. Tracing to requirements
 - B. Tracking data backwards and forwards
 - C. Walking through logic
 - D. Prototyping and simulation techniques
 - E. Evaluating key quality factor "ilities"
 - F. Exercising user/operations instructions
 - G. Checking installation, support, maintenance
 - H. Outside-the-box techniques
 - I. Challenging designs by test planning
- VIII. Managing the Review Process**
 - A. Measuring the "proof of the pudding"
 - B. Tying back to actual time/cost/problems
 - C. Enlisting the right resources, cooperation
 - D. Managing changes
 - E. Measuring effectiveness meaningfully