

## Testing Dirty Systems

"Traditional testing approaches generally do not work with dirty systems. A different approach is needed if testing is going to be effective. However, the tailored approaches need merely to be extensions of good testing practices.

"In order to understand the difference between common testing approaches and the approach needed for dirty system testing, let's look at a coffee-making analogy. Let's assume that we have brewed a pot of coffee and it is filled with specks of coffee bean. These bean specks are errors or defects in the coffee. The objective of testing is to remove these defects. Traditional approaches might involve the use of tweezers to pick out the bean specks one at a time. Although after enough time and effort all of the bean specks would be removed, by then the coffee would probably be cold and undesirable. The dirty system approach proposed in *Testing Dirty Systems* would be to pour the coffee through a filter. The filter would catch all of the bean specks and we would have hot, defect-free coffee in almost an instant.

"Dirty system testing incorporates the experiences of leading test organizations over long periods of time. It incorporates good testing practices together with knowledge of why systems fail. In essence, the approach incorporates the combined experiences of many testers into an effective test practice."

—from Chapter 2

### About the Authors



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# Testing Dirty Systems

by William E. Perry and Randall W. Rice

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From the Authors of  
*Surviving the Top Ten Challenges of Software Testing,  
Guidance on Testing the Toughest Systems*

Some systems are more difficult to test than others. Software testers contend with undefined or partially defined requirements; outdated, incomplete, or nonexistent documentation; complex logic; a mixture of languages; or worse. All of these factors make a system dirty, or virtually untestable.

In *Testing Dirty Systems*, authors William Perry and Randall Rice teach testers a six-step process for approaching such systems: system diagnosis • test planning • test execution • test analysis • report development • dirty system repair.

Because of the unknown characteristics of the dirty system, the traditional validation of comparing actual processing results against the expected processing results is often inadequate. Analysis of a dirty system must go much further into describing the

expected operational characteristics of the system, including

- probability of failure based on failures during testing
- expected difficulty of making changes based on inadequacy of documentation
- estimate of defects that remain in the system
- operating conditions that will lead to failures
- coverage levels based on code or test cases
- complexity levels based on coding structure

Project leaders, independent testers, quality assurance personnel, and IS auditors will benefit from this book, as well as end-users and customers with a vested interest in the success of their systems.

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