activities that may be appropriate at each development phase. Recent research involving some of the more formal specification languages (such as PSL/PA) and automated support tools is cited. However, not enough details of this work are presented to assess its merit.

The section on structural analysis and proof covers a wide range of topics in summary form, including modeling with petri nets, Hoare/Floyd-based proving techniques, software fault-free analysis, and inspection and walkthrough review techniques.

This section is indicative of the approach taken in the book. A wide range of methods is described in summary fashion, some very practical and subjective (such as code walkthroughs) and others offering promise only after further substantial progress is achieved (for example, the axiomatic approach to the correctness proof for parallel programs).

The systematic testing section contains very brief treatments of path testing, domain testing, mutation analysis, and structured testing strategies (such as bottom-up and top-down). The use of metrics to measure test coverage and tools to automate some test activities are also briefly described.

The most original contributions of the book appear in the section on statistical testing. Statistical testing aims to show that the probability of a software failure falls below a certain limit. It is intended for complex applications where systematic testing is impractical. The probability of failure is a function of the extent to which the dependencies and properties of a program's behavior have been tested.

Whether this approach for determining the required number of test cases for a given reliability will result in realistic test strategies has not, as yet, been demonstrated. However, this section provides an interesting viewpoint.

The section on simulation and system validation is very general, in large part because of the application-dependent nature of simulation and system validation.

Although the book has the term "real-time" in its title, it includes little discussion of specific real-time topics. In many of the contexts where real-time is discussed, only the complexity of and need for reliability in real-time applications is considered.

With the exception of the section on statistical testing, most of the book ignores the very difficult real-time problems such as deadline constraints, fault tolerance and recovery, interacting synchronous and asynchronous functions, man-machine interfaces, and dynamic allocation of system resources.

Edited technical books like this one often turn out to be collections of overlapping papers from a conference workshop. It is pleasant to report that this is not the case here: all the separate authors' contributions are well-coordinated and consistent.

The authors are affiliated with several European organizations, and I found it interesting that there is little difference between their concerns and solutions and current practice in the United States.

This book will interest individuals concerned about the verification problem, either from the academic computer science viewpoint or from the commercial software development viewpoint.

Readers having one of these viewpoints will be exposed to a little bit of the other.

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