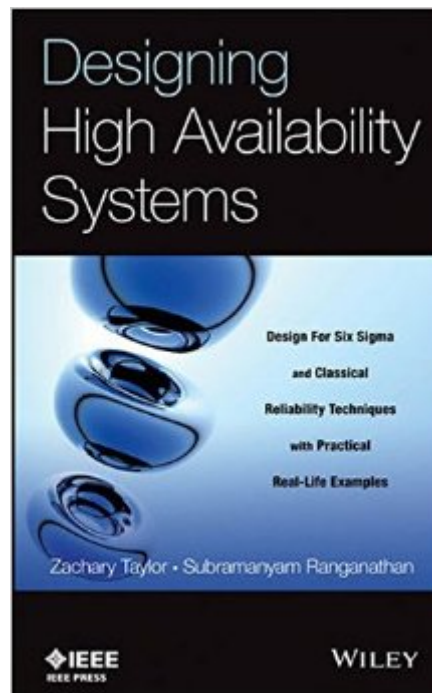# Designing High Availability Systems: DFSS And Classical Reliability Techniques With Practical Real Life Examples

Synopsis

A practical, step-by-step guide to designing world-class, high availability systems using both classical and DFSS reliability techniques Whether designing telecom, aerospace, automotive, medical, financial, or public safety systems, every engineer aims for the utmost reliability and availability in the systems he, or she, designs. But between the dream of world-class performance and reality falls the shadow of complexities that can bedevil even the most rigorous design process. While there are an array of robust predictive engineering tools, there has been no single-source guide to understanding and using them . . . until now. Offering a case-based approach to designing, predicting, and deploying world-class high-availability systems from the ground up, this book brings together the best classical and DFSS reliability techniques. Although it focuses on technical aspects, this guide considers the business and market constraints that require that systems be designed right the first time. Written in plain English and following a step-by-step "cookbook" format, Designing High Availability Systems: Shows how to integrate an array of design/analysis tools, including Six Sigma, Failure Analysis, and Reliability Analysis Features many real-life examples and case studies describing predictive design methods, tradeoffs, risk priorities, "what-if" scenarios, and more Delivers numerous high-impact takeaways that you can apply to your current projects immediately Provides access to MATLAB programs for simulating problem sets presented, along with PowerPoint slides to assist in outlining the problem-solving process Designing High Availability Systems is an indispensable working resource for system engineers, software/hardware architects, and project teams working in all industries.

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Customer Reviews

By chance got this book from friend. This is the one of the best book that I have read in terms of incorporating the six sigma quality methods into real product design. In the past, Six sigma always give me the impression that it could only be used for process improvement. In this book, the authors open people's mind to think how to build the quality into the product instead of testing for quality by using different kind of quality tools/technics. It is the book that worth being read.

I think this book has some special character, as it successfully combines the theory and the application of the theory with some useful examples, and even provides some Mathlab code that the reader can readily apply in the learning process, as well as, when applying the learnings in his/her daily work. I can highly recommend this book, as it fills the gap in the reliability literature. Quite many good references on reliability theory has been published, but this book takes the next step, and demonstrates, which are the limitations of the theory, and how the reader can apply these methods in his/her daily duties.

The authors present several key DFSS tools and detailed step-by-step procedures for applying these tools effectively to your projects. With a case-based approach, they have explained how to design and maximize system availability using these DFSS reliability techniques. The enterprise can significantly cut down cost of poor quality and customer reported defects after system deployments. I found the discussion on DFMEA tools in particular extremely useful and thought provoking.

This book provides many detailed explanations and demonstrations of useful tools and techniques which can be employed for designing high availability systems. The mathematical treatment of classical reliability techniques is quite thorough. DFSS techniques are then introduced with useful examples and are graded in complexity from a subject matter standpoint. Overall, it is an excellent read for engineering experts as well as practitioners to learn and apply a rich set of techniques to design systems that require high availability.

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