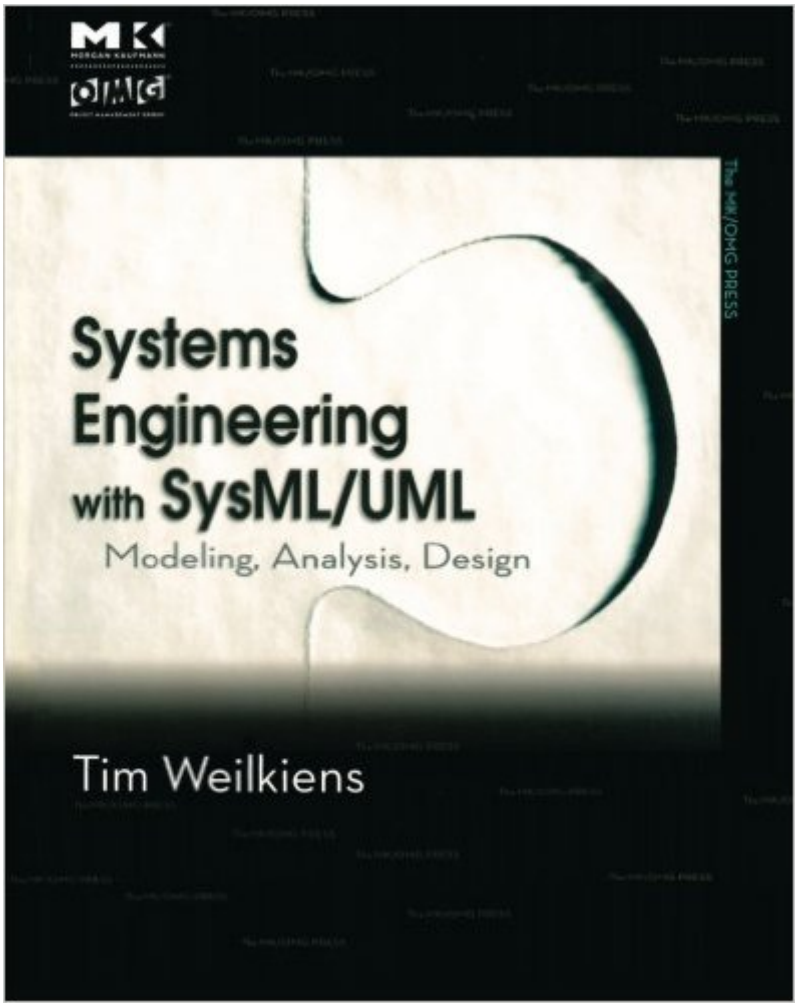
Systems Engineering With SysML/UML: Modeling, Analysis, Design (The MK/OMG Press)



Synopsis

UML, the Universal Modeling Language, was the first programming language designed to fulfill the requirement for "universality." However, it is a software-specific language, and does not support the needs of engineers designing from the broader systems-based perspective. Therefore, SysML was created. It has been steadily gaining popularity, and many companies, especially in the heavily-regulated Defense, Automotive, Aerospace, Medical Device and Telecomms industries, are already using SysML, or are plannning to switch over to it in the near future. However, little information is currently available on the market regarding SysML. Its use is just on the crest of becoming a widespread phenomenon, and so thousands of software engineers are now beginning to look for training and resources. This book will serve as the one-stop, definitive guide that provide an introduction to SysML, and instruction on how to implement it, for all these new users. *SysML is the latest emerging programming language--250,000 estimated software systems engineers are using it in the US alone! *The first available book on SysML in English *Insider information! The author is a member of the SysML working group and has written sections of the specification *Special focus comparing SysML and UML, and explaining how both can work together

Book Information

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Customer Reviews

SysML is hard! So it should not be surprising that authors writing on the subject will be faced with a difficult task. To better understand the difficulties we all encounter in mastering SysML, we need

look no further than its name. The Sys refers to Systems Engineering. To be a good systems engineer requires, first understanding the technical domains under study. Then systems engineering techniques needs to applied so that a comprehensive understanding of component relationships both among themselves and their environments can be achieved. The ML refers to the Unified Modeling Language (UML) upon which SysML is based. Thus, to understand SysML, one really needs a background in UML. But UML was designed to depict abstractions of object-oriented programs which logically leads to the realization that OO programming experience is also necessary, or at least very helpful. With these prerequisites, OO programming, UML, systems engineering and domain knowledge under your belt, you are ready to master SysML.The author clearly understands this as the book is largely structured along these lines in six chapters, starting with introductory material related systems engineering. Chapter 2 extends these ideas to a case study showing how various SysML diagrams and features can be brought to bear in understanding a system from various perspectives. This is followed by a chapter on UML as it pertains to SysML. The final two chapters, 62 pages, are devoted to SysML.I am unsure of the rationale of putting the case study at the beginning as it uses information from subsequent chapters. Readers may find useful to look first at the UML and SysML chapters, and return later to the case study.

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