Requirements Engineering: From System Goals to UML Models to Software Specifications

By Axel van Lamsweerde

Requirements Engineering: From System Goals to UML Models to Software Specifications By Axel van Lamsweerde

Essential comprehensive coverage of the fundamentals of requirements engineering

Requirements engineering (RE) deals with the variety of prerequisites that must be met by a software system within an organization in order for that system to produce stellar results. With that explanation in mind, this must-have book presents a disciplined approach to the engineering of high-quality requirements. Serving as a helpful introduction to the fundamental concepts and principles of requirements engineering, this guide offers a comprehensive review of the aim, scope, and role of requirements engineering as well as best practices and flaws to avoid.

- Shares state-of-the-art techniques for domain analysis, requirements elicitation, risk analysis, conflict management, and more
- Features in-depth treatment of system modeling in the specific context of engineering requirements
- Presents various forms of reasoning about models for requirements quality assurance
- Discusses the transitions from requirements to software specifications to software architecture

In addition, case studies are included that complement the many examples provided in the book in order to show you how the described method and techniques are applied in practical situations.

Requirements Engineering: From System Goals to UML Models to Software Specifications

By Axel van Lamsweerde

Requirements Engineering: From System Goals to UML Models to Software Specifications By Axel van Lamsweerde

Essential comprehensive coverage of the fundamentals of requirements engineering

Requirements engineering (RE) deals with the variety of prerequisites that must be met by a software system within an organization in order for that system to produce stellar results. With that explanation in mind, this must-have book presents a disciplined approach to the engineering of high-quality requirements. Serving as a helpful introduction to the fundamental concepts and principles of requirements engineering, this guide offers a comprehensive review of the aim, scope, and role of requirements engineering as well as best practices and flaws to avoid.

- Shares state-of-the-art techniques for domain analysis, requirements elicitation, risk analysis, conflict management, and more
- Features in-depth treatment of system modeling in the specific context of engineering requirements
- Presents various forms of reasoning about models for requirements quality assurance
- Discusses the transitions from requirements to software specifications to software architecture

In addition, case studies are included that complement the many examples provided in the book in order to show you how the described method and techniques are applied in practical situations.

Requirements Engineering: From System Goals to UML Models to Software Specifications By Axel van Lamsweerde Bibliography

- Sales Rank: #1082058 in Books
- Brand: imusti
- Published on: 2009-02-09
- Released on: 2009-01-30
- Original language: English
- Number of items: 1
- Dimensions: 9.17" h x 1.53" w x 7.44" l, 2.77 pounds
- Binding: Paperback
- 712 pages

⬇ **Download** Requirements Engineering: From System Goals to UML ...pdf

▤ **Read Online** Requirements Engineering: From System Goals to U ...pdf

Download and Read Free Online Requirements Engineering: From System Goals to UML Models to Software Specifications By Axel van Lamsweerde

Editorial Review

From the Back Cover
This book provides a systematic and practical approach to the engineering of high-quality requirements. It covers the entire requirements lifecycle and integrates state-of-the-art techniques for requirements elicitation, evaluation, specification, analysis, and evolution. Modeling plays a central role. A method is presented for building and analyzing a multi-view model of the target system, where each step is supported by heuristic rules, tactics, modeling patterns, and bad smells to avoid.

Highlights include:

- A comprehensive introduction to the fundamentals of requirements engineering, including techniques for: requirements elicitation and reuse, risk analysis, conflict management, and requirements prioritization; requirements specification, inspection, validation, and verification; traceability management and change control.
- An in-depth treatment of system modelling for requirements engineering, including constructive techniques for modeling system goals, conceptual objects, responsibilities among system agents, operations, scenarios and intended behaviors, and countermeasures to anticipated hazards and threats.
- A variety of techniques for model-based evaluation of alternative options, model refinement checking, model animation, property verification, inductive model synthesis, and analysis of conflicts, hazards, and security threats.
- Use of standard UML notations wherever applicable. Most techniques are based on a solid formal framework, kept hidden throughout the major part of the book for wider accessibility.
- Numerous examples from running case studies in a variety of domains, including security- and safety-critical ones. Rich set of problems and exercises at the end of each chapter together with bibliographical notes for further study.

The book is primarily written for undergraduates and masters students in software or system engineering to acquire a solid background in requirements engineering and system modelling. It is also intended for practitioners in need of systematic guidance for elaborating and analyzing requirements. The last part on model-based reasoning is more targeted to graduate students. A companion website with additional instructor resources and tool support can be found at www.wileyeurope.com/college/van lamsweerde

About the Author
Axel van Lamsweerde is Professor in the Department of Computing Science at the Université catholique de Louvain (UCL), Belgium. He recently received the ACM SIGSOFT Outstanding Research Award for "deep and lasting contributions to the theory and practice of requirements engineering".

Users Review

From reader reviews:

Tara Gamboa:

Reading a publication can be one of a lot of exercise that everyone in the world really likes. Do you like reading book so. There are a lot of reasons why people enjoyed. First reading a book will give you a lot of

new details. When you read a guide you will get new information simply because book is one of various ways to share the information or maybe their idea. Second, looking at a book will make you actually more imaginative. When you studying a book especially tale fantasy book the author will bring that you imagine the story how the figures do it anything. Third, you may share your knowledge to other individuals. When you read this Requirements Engineering: From System Goals to UML Models to Software Specifications, you are able to tells your family, friends along with soon about yours publication. Your knowledge can inspire others, make them reading a guide.

Terry Crabtree:

People live in this new day time of lifestyle always try and and must have the time or they will get lot of stress from both everyday life and work. So , if we ask do people have extra time, we will say absolutely yes. People is human not only a robot. Then we request again, what kind of activity do you have when the spare time coming to an individual of course your answer will unlimited right. Then do you ever try this one, reading guides. It can be your alternative in spending your spare time, often the book you have read is usually Requirements Engineering: From System Goals to UML Models to Software Specifications.

Robin Norfleet:

Do you like reading a guide? Confuse to looking for your chosen book? Or your book was rare? Why so many issue for the book? But any people feel that they enjoy with regard to reading. Some people likes looking at, not only science book but additionally novel and Requirements Engineering: From System Goals to UML Models to Software Specifications or even others sources were given information for you. After you know how the good a book, you feel want to read more and more. Science e-book was created for teacher as well as students especially. Those books are helping them to add their knowledge. In other case, beside science publication, any other book likes Requirements Engineering: From System Goals to UML Models to Software Specifications to make your spare time more colorful. Many types of book like this.

Stacy Knarr:

What is your hobby? Have you heard which question when you got pupils? We believe that that problem was given by teacher to their students. Many kinds of hobby, Everyone has different hobby. And also you know that little person similar to reading or as studying become their hobby. You must know that reading is very important as well as book as to be the issue. Book is important thing to add you knowledge, except your own personal teacher or lecturer. You see good news or update in relation to something by book. Amount types of books that can you choose to use be your object. One of them is niagra Requirements Engineering: From System Goals to UML Models to Software Specifications.

Download and Read Online Requirements Engineering: From System Goals to UML Models to Software Specifications By Axel

van Lamsweerde #BWY1OI86GZ5

Read Requirements Engineering: From System Goals to UML Models to Software Specifications By Axel van Lamsweerde for online ebook

Requirements Engineering: From System Goals to UML Models to Software Specifications By Axel van Lamsweerde Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Requirements Engineering: From System Goals to UML Models to Software Specifications By Axel van Lamsweerde books to read online.

Online Requirements Engineering: From System Goals to UML Models to Software Specifications By Axel van Lamsweerde ebook PDF download

Requirements Engineering: From System Goals to UML Models to Software Specifications By Axel van Lamsweerde Doc

Requirements Engineering: From System Goals to UML Models to Software Specifications By Axel van Lamsweerde Mobipocket

Requirements Engineering: From System Goals to UML Models to Software Specifications By Axel van Lamsweerde EPub

BWY1OI86GZ5: Requirements Engineering: From System Goals to UML Models to Software Specifications By Axel van Lamsweerde