

1. Record Nr.	UNINA9910781991703321
Autore	Friedenthal Sanford
Titolo	A practical guide to sysml : the systems modeling language // Sanford Friedenthal, Alan Moore, Rick Steiner ; cover designer, Mark Rogers
Pubbl/distr/stampa	Waltham, Massachusetts : , : Morgan Kaufmann, , 2015 ©2015
ISBN	0-12-800202-6 1-283-29367-6 9786613293671
Edizione	[Third edition.]
Descrizione fisica	1 online resource (641 pages)
Collana	MK/OMG Press.
Disciplina	620.001/171
Soggetti	Systems engineering Computer simulation SysML (Computer science)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front Cover; Morgan Kaufmann OMG Press; A Practical Guide to SysML: The Systems Modeling Language; Copyright; Contents; Preface; Book Organization; Uses of this Book; How to Read This Book; Changes from Previous Edition; Acknowledgments; About the Authors; Part I Introduction; Chapter 1 - Systems Engineering Overview; 1.1 Motivation for Systems Engineering; 1.2 The Systems Engineering Process; 1.3 Typical Application of the Systems Engineering Process; 1.4 Multidisciplinary Systems Engineering Team; 1.5 Codifying Systems Engineering Practice through Standards; 1.6 Summary; 1.7 Questions Chapter 2 - Model-Based Systems Engineering 2.1 Contrasting the Document-Based and Model-Based Approach; 2.2 Modeling Principles; 2.3 Summary; 2.4 Questions; Chapter 3 - Getting Started with SysML; 3.1 SysML Purpose and Key Features; 3.2 SysML Diagram Overview; 3.3 Introducing SysML-Lite; 3.4 A Simplified MBSE Method; 3.5 The Learning Curve for SysML and MBSE; 3.6 Summary; 3.7 Questions; Chapter 4 - An Automobile Example Using the SysML Basic Feature Set; 4.1 SysML Basic Feature Set; 4.2 Automobile Example Overview; 4.3 Automobile Model; 4.4 Model Interchange; 4.5 Summary; 4.6 Questions

Part II Language Description Chapter 5 - SysML Language Architecture; 5.1 The OMG SysML Language Specification; 5.2 The Architecture of the SysML Language; 5.3 SysML Diagrams; 5.4 The Surveillance System Case Study; 5.5 Organization of Part II; 5.6 Questions; Chapter 6 - Organizing the Model with Packages; 6.1 Overview; 6.2 The Package Diagram; 6.3 Defining Packages Using a Package Diagram; 6.4 Organizing a Package Hierarchy; 6.5 Showing Packageable Elements on a Package Diagram; 6.6 Packages as Namespaces; 6.7 Importing Model Elements into Packages
6.8 Showing Dependencies between Packageable Elements
6.9 Specifying Views and Viewpoints; 6.10 Summary; 6.11 Questions; Chapter 7 - Modeling Structure with Blocks; 7.1 Overview; 7.2 Modeling Blocks on a Block Definition Diagram; 7.3 Modeling the Structure and Characteristics of Blocks Using Properties; 7.4 Modeling Flows; 7.5 Modeling Block Behavior; 7.6 Modeling Interfaces Using Ports; 7.7 Modeling Classification Hierarchies Using Generalization; 7.8 Modeling Block Configurations Using Instances; 7.9 Deprecated Features; 7.10 Summary; 7.11 Questions
Chapter 8 - Modeling Constraints with Parametrics
8.1 Overview; 8.2 Using Constraint Expressions to Represent System Constraints; 8.3 Encapsulating Constraints in Constraint Blocks to Enable Reuse; 8.4 Using Composition to Build Complex Constraint Blocks; 8.5 Using a Parametric Diagram to Bind Parameters of Constraint Blocks; 8.6 Constraining Value Properties of a Block; 8.7 Capturing Values in Block Configurations; 8.8 Constraining Time-Dependent Properties to Facilitate Time-Based Analysis; 8.9 Using Constraint Blocks to Constrain Item Flows; 8.10 Describing an Analysis Context
8.11 Modeling Evaluation of Alternatives and Trade Studies

Sommario/riassunto

A general purpose graphical modeling language used to specify, analyze, and design systems that may include hardware, software, and personnel, SysML is now being adopted by companies across a broad range of industries, including aerospace and defense, automotive, and IT system developers. This book is the bestselling, authoritative guide to SysML for systems and software engineers, providing a comprehensive and practical resource for modeling systems with SysML. Fully updated to cover newly released version 1.3, it includes a full description of the modeling language along with a quick refe
