Embedded Systems: Analysis and Modeling with SysML, UML and AADL

From Wiley-ISTE

Embedded Systems: Analysis and Modeling with SysML, UML and AADL
From Wiley-ISTE

Since the construction of the first embedded system in the 1960s, embedded systems have continued to spread. They provide a continually increasing number of services and are part of our daily life. The development of these systems is a difficult problem which does not yet have a global solution. Another difficulty is that systems are plunged into the real world, which is not discrete (as is generally understood in computing), but has a richness of behaviors which sometimes hinders the formulation of simplifying assumptions due to their generally autonomous nature and they must face possibly unforeseen situations (incidents, for example), or even situations that lie outside the initial design assumptions. Embedded Systems presents the state of the art of the development of embedded systems and, in particular, concentrates on the modeling and analysis of these systems by looking at "model-driven engineering", (MDE2): SysML, UML/MARTE and AADL. A case study (based on a pacemaker) is presented which enables the reader to observe how the different aspects of a system are addressed using the different approaches. All three systems are important in that they provide the reader with a global view of their possibilities and demonstrate the contributions of each approach in the different stages of the software lifecycle. Chapters dedicated to analyzing the specification and code generation are also presented.

Contents

About the Authors

Fabrice Kordon is Professor at University Pierre and Marie Curie in Paris, France, where he is in charge of the team "Modélisation et vérification" of the LIP6. His research field is at the crossroads of distributed systems, software engineering and formal methods.

Jérôme Hugues is lecturer-researcher at the Institut Supérieur de l'Aéronautique et de l'Espace (ISAE) in Toulouse, France and has been a member of the language standardization committee (AADL) since 2006. His research fields cover the engineering of embedded systems and the generation of automatic code of these systems from modeling languages, integrating verification and analysis tools on the model and code level.

Agusti Canals is a software engineer and has worked at CS "Communication et Systèmes" in Paris, France since 1981. He is deputy director of the "Direction de la Qualité et des Audits Technique

Embedded Systems: Analysis and Modeling with SysML, UML and AADL

From Wiley-ISTE

Embedded Systems: Analysis and Modeling with SysML, UML and AADL From Wiley-ISTE

Since the construction of the first embedded system in the 1960s, embedded systems have continued to spread. They provide a continually increasing number of services and are part of our daily life. The development of these systems is a difficult problem which does not yet have a global solution. Another difficulty is that systems are plunged into the real world, which is not discrete (as is generally understood in computing), but has a richness of behaviors which sometimes hinders the formulation of simplifying assumptions due to their generally autonomous nature and they must face possibly unforeseen situations (incidents, for example), or even situations that lie outside the initial design assumptions. Embedded Systems presents the state of the art of the development of embedded systems and, in particular, concentrates on the modeling and analysis of these systems by looking at "model-driven engineering", (MDE2): SysML, UML/MARTE and AADL. A case study (based on a pacemaker) is presented which enables the reader to observe how the different aspects of a system are addressed using the different approaches. All three systems are important in that they provide the reader with a global view of their possibilities and demonstrate the contributions of each approach in the different stages of the software lifecycle. Chapters dedicated to analyzing the specification and code generation are also presented.

Contents

About the Authors

Fabrice Kordon is Professor at University Pierre and Marie Curie in Paris, France, where he is in charge of the team "Modélisation et vérification" of the LIP6. His research field is at the crossroads of distributed systems, software engineering and formal methods.

Jérôme Hugues is lecturer-researcher at the Institut Supérieur de l'Aéronautique et de l'Espace (ISAE) in Toulouse, France and has been a member of the language standardization committee (AADL) since 2006. His research fields cover the engineering of embedded systems and the generation of automatic code of these systems from modeling languages, integrating verification and analysis tools on the model and code level.

Agusti Canals is a software engineer and has worked at CS "Communication et Systèmes" in Paris, France since 1981. He is deputy director of the "Direction de la Qualité et des Audits Technique

Embedded Systems: Analysis and Modeling with SysML, UML and AADL From Wiley-ISTE Bibliography

- Rank: #2176243 in eBooks
- Published on: 2013-05-06
- Released on: 2013-05-06
- Format: Kindle eBook

Download and Read Free Online Embedded Systems: Analysis and Modeling with SysML, UML and AADL From Wiley-ISTE

Editorial Review

Users Review

From reader reviews:

Ebony Lower:

Information is provisions for individuals to get better life, information these days can get by anyone from everywhere. The information can be a expertise or any news even a concern. What people must be consider if those information which is inside former life are difficult to be find than now could be taking seriously which one is suitable to believe or which one the resource are convinced. If you obtain the unstable resource then you obtain it as your main information we will see huge disadvantage for you. All those possibilities will not happen with you if you take Embedded Systems: Analysis and Modeling with SysML, UML and AADL as the daily resource information.

Joaquin Hogan:

Playing with family inside a park, coming to see the coastal world or hanging out with friends is thing that usually you have done when you have spare time, after that why you don't try matter that really opposite from that. A single activity that make you not experiencing tired but still relaxing, trilling like on roller coaster you are ride on and with addition of knowledge. Even you love Embedded Systems: Analysis and Modeling with SysML, UML and AADL, you could enjoy both. It is good combination right, you still want to miss it? What kind of hang-out type is it? Oh seriously its mind hangout fellas. What? Still don't obtain it, oh come on its known as reading friends.

Holly Murphy:

You may get this Embedded Systems: Analysis and Modeling with SysML, UML and AADL by browse the bookstore or Mall. Merely viewing or reviewing it might to be your solve challenge if you get difficulties for the knowledge. Kinds of this book are various. Not only simply by written or printed but in addition can you enjoy this book through e-book. In the modern era just like now, you just looking from your mobile phone and searching what your problem. Right now, choose your current ways to get more information about your book. It is most important to arrange yourself to make your knowledge are still upgrade. Let's try to choose correct ways for you.

Luther Keller:

Many people said that they feel fed up when they reading a guide. They are directly felt that when they get a half elements of the book. You can choose the particular book Embedded Systems: Analysis and Modeling with SysML, UML and AADL to make your current reading is interesting. Your own personal skill of

reading proficiency is developing when you just like reading. Try to choose straightforward book to make you enjoy to see it and mingle the feeling about book and reading through especially. It is to be initial opinion for you to like to start a book and read it. Beside that the e-book Embedded Systems: Analysis and Modeling with SysML, UML and AADL can to be your friend when you're truly feel alone and confuse in what must you're doing of their time.

Download and Read Online Embedded Systems: Analysis and Modeling with SysML, UML and AADL From Wiley-ISTE #7NCI3QR8X2A

Read Embedded Systems: Analysis and Modeling with SysML, UML and AADL From Wiley-ISTE for online ebook

Embedded Systems: Analysis and Modeling with SysML, UML and AADL From Wiley-ISTE 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 Embedded Systems: Analysis and Modeling with SysML, UML and AADL From Wiley-ISTE books to read online.

Online Embedded Systems: Analysis and Modeling with SysML, UML and AADL From Wiley-ISTE ebook PDF download

Embedded Systems: Analysis and Modeling with SysML, UML and AADL From Wiley-ISTE Doc

Embedded Systems: Analysis and Modeling with SysML, UML and AADL From Wiley-ISTE Mobipocket

Embedded Systems: Analysis and Modeling with SysML, UML and AADL From Wiley-ISTE EPub

7NCI3QR8X2A: Embedded Systems: Analysis and Modeling with SysML, UML and AADL From Wiley-ISTE