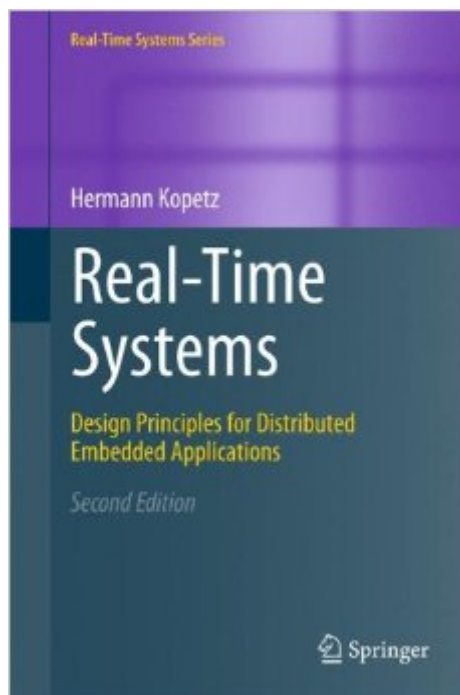


The book was found

# Real-Time Systems: Design Principles For Distributed Embedded Applications (Real-Time Systems Series)



## Synopsis

"This book is a comprehensive text for the design of safety critical, hard real-time embedded systems. It offers a splendid example for the balanced, integrated treatment of systems and software engineering, helping readers tackle the hardest problems of advanced real-time system design, such as determinism, compositionality, timing and fault management. This book is an essential reading for advanced undergraduates and graduate students in a wide range of disciplines impacted by embedded computing and software. Its conceptual clarity, the style of explanations and the examples make the abstract concepts accessible for a wide audience." Janos Sztipanovits, Director, E. Bronson Ingram Distinguished Professor of Engineering, Institute for Software Integrated Systems, Vanderbilt University

**Real-Time Systems** focuses on hard real-time systems, which are computing systems that must meet their temporal specification in all anticipated load and fault scenarios. The book stresses the system aspects of distributed real-time applications, treating the issues of real-time, distribution and fault-tolerance from an integral point of view. A unique cross-fertilization of ideas and concepts between the academic and industrial worlds has led to the inclusion of many insightful examples from industry to explain the fundamental scientific concepts in a real-world setting. Compared to the first edition, new developments in complexity management, energy and power management, dependability, security, and the internet of things, are addressed. The book is written as a standard textbook for a high-level undergraduate or graduate course on real-time embedded systems or cyber-physical systems. Its practical approach to solving real-time problems, along with numerous summary exercises, makes it an excellent choice for researchers and practitioners alike.

## Book Information

Series: Real-Time Systems Series (Book 25)

Hardcover: 378 pages

Publisher: Springer; 2nd ed. 2011 edition (April 26, 2011)

Language: English

ISBN-10: 1441982361

ISBN-13: 978-1441982360

Product Dimensions: 6.1 x 0.9 x 9.2 inches

Shipping Weight: 1.6 pounds (View shipping rates and policies)

Average Customer Review: 4.7 out of 5 stars See all reviews (6 customer reviews)

Best Sellers Rank: #1,018,904 in Books (See Top 100 in Books) #68 in Books > Computers &

Technology > Computer Science > AI & Machine Learning > Expert Systems #115 inÂ Books > Computers & Technology > Hardware & DIY > Microprocessors & System Design > Embedded Systems #200 inÂ Books > Computers & Technology > Hardware & DIY > Internet & Networking

## Customer Reviews

This book is exactly what I have been waiting for. I started to work as a programmer for Boeing in 1985, went to grad school, worked at a research lab, then am in the academe. Along the way, I have gotten exposed to real-time computing in bits and pieces on a good number of projects. But none of them required me to get very deep into real-time computing, and I have never had a class in it. But I have been meaning to learn more, and in a systematic way, for some time. So, from that context, it was with great anticipation that I learned of Prof. Kopetz's new edition (2ed). He is without question one of the top researchers in the area of fault-tolerant real-time computing, based on his long record of publishing in DSN and other top publication venues. He has worked with the auto industry literally for decades, and has recently branched out. So is is very applied and "down to earth". Ergo, my anticipation. This book did not disappoint this applied practitioner, researcher, and instructor. It had the gamut of topics, with a focus on time-triggered technologies, ranging from global time, models, fault-tolerance, real-time communication, real-time operating systems, and scheduling. All concrete and "meaty" topics. There were also a number of topics that seem very important to architecting and engineering a real-time system, including simplicity (that one surprised me, but made a lot of sense in hindsight), system design, and validation. It also had good material on very timely applied research concerns: an entire chapter on the "Internet of Things" (IoT), and "cyber-physical systems" issues were spread throughout the book.

[Download to continue reading...](#)

Real-Time Systems: Design Principles for Distributed Embedded Applications (Real-Time Systems Series) Embedded FreeBSD Cookbook (Embedded Technology) Hard Real-Time Computing Systems: Predictable Scheduling Algorithms and Applications (Real-Time Systems Series) Designing Concurrent, Distributed, and Real-Time Applications with UML Digital Speech: Coding for Low Bit Rate Communication Systems (Wiley Series in Communication and Distributed Systems) Real-Time Systems and Programming Languages: Ada, Real-Time Java and C/Real-Time POSIX (4th Edition) (International Computer Science Series) Programming Distributed Applications with Com and Microsoft Visual Basic 6.0 (Programming/Visual Basic) Designing Distributed Applications with XML, ASP, IE5, LDAP and MSMQ Embedded Linux Porting on ARM & RFID Implementation Using ARM SoC: Developing a flexible and agile Board Secure Package Linux with multiple

applications ARM Assembly for Embedded Applications The Embedded Internet: TCP/IP Basics, Implementation and Applications Serial Port Complete: COM Ports, USB Virtual COM Ports, and Ports for Embedded Systems (Complete Guides series) Layer 3 Switching: A Guide for It Professionals (Prentice Hall Series in Computer Networking and Distributed Systems) Practical Linux Programming: Device Drivers, Embedded systems, and the Internet (with CD- ROM) (Programming Series) Principles of Concurrent and Distributed Programming (2nd Edition) Implementing Distributed Systems with Java and CORBA Trends in Distributed Systems: CORBA and Beyond: International Workshop TreDS '96 Aachen, Germany, October 1 - 2, 1996; Proceedings (Lecture Notes in Computer Science) Building Distributed, Object-Oriented Business Systems Using CORBA Embedded Linux: Das Praxisbuch (X.systems.press) (German Edition) Distributed Systems - Architecture and Implementation: An Advanced Course (Springer Study Edition)

[Dmca](#)