Protocol Engineering

Hartmut König

Protocol Engineering

Hartmut König

Protocol Engineering Hartmut König

Communication protocols form the operational basis of computer networks and telecommunication systems. They are behavior conventions that describe how communication systems interact with each other, defining the temporal order of the interactions and the formats of the data units exchanged – essentially they determine the efficiency and reliability of computer networks. *Protocol Engineering* is an important discipline covering the design, validation, and implementation of communication protocols.

Part I of this book is devoted to the fundamentals of communication protocols, describing their working principles and implicitly also those of computer networks. The author introduces the concepts of service, protocol, layer, and layered architecture, and introduces the main elements required in the description of protocols using a model language. He then presents the most important protocol functions. Part II deals with the description of communication protocols, offering an overview of the various formal methods, the essence of *Protocol Engineering*. The author introduces the fundamental description methods, such as finite state machines, Petri nets, process calculi, and temporal logics, that are in part used as semantic models for formal description techniques. He then introduces one representative technique for each of the main description approaches, among others SDL and LOTOS, and surveys the use of UML for describing protocols. Part III covers the protocol life cycle and the most important development stages, presenting the reader with approaches for systematic protocol design, with various verification methods, with the main implementation techniques, and with strategies for their testing, in particular with conformance and interoperability tests, and the test description language TTCN. The author uses the simple data transfer example protocol XDT (*eXample Data Transfer*) throughout the book as a reference protocol to exemplify the various description techniques and to demonstrate important validation and implementation approaches.

The book is an introduction to communication protocols and their development for undergraduate and graduate students of computer science and communication technology, and it is also a suitable reference for engineers and programmers. Most chapters contain exercises, and the author's accompanying website provides further online material including a complete formal description of the XDT protocol and an animated simulation visualizing its behavior.

Download and Read Free Online Protocol Engineering Hartmut König

---

From reader reviews:

Nathaniel Thomas:

Book is to be different for each and every grade. Book for children until eventually adult are different content. As we know that book is very important normally. The book Protocol Engineering seemed to be making you to know about other information and of course you can take more information. It doesn't matter what advantages for you. The publication Protocol Engineering is not only giving you considerably more new information but also to become your friend when you truly feel bored. You can spend your personal spend time to read your guide. Try to make relationship while using book Protocol Engineering. You never feel lose out for everything in case you read some books.

Carmela Randle:

Information is provisions for individuals to get better life, information nowadays can get by anyone with everywhere. The information can be a knowledge or any news even a problem. What people must be consider if those information which is from the former life are challenging be find than now could be taking seriously which one works to believe or which one the particular resource are convinced. If you get the unstable resource then you understand it as your main information you will have huge disadvantage for you. All of those possibilities will not happen throughout you if you take Protocol Engineering as the daily resource information.

Eddie Patten:

This book untitled Protocol Engineering to be one of several books this best seller in this year, this is because when you read this book you can get a lot of benefit into it. You will easily to buy this book in the book retail store or you can order it by using online. The publisher with this book sells the e-book too. It makes you more easily to read this book, because you can read this book in your Touch screen phone. So there is no reason to you personally to past this guide from your list.

Ruth Lowry:

Protocol Engineering can be one of your beginner books that are good idea. All of us recommend that straight away because this guide has good vocabulary that will increase your knowledge in vocab, easy to understand, bit entertaining but still delivering the information. The article author giving his/her effort that will put every word into delight arrangement in writing Protocol Engineering however doesn't forget the main stage, giving the reader the hottest in addition to based confirm resource data that maybe you can be certainly one of it. This great information can certainly drawn you into brand-new stage of crucial contemplating.

Read Protocol Engineering by Hartmut König for online ebook

Protocol Engineering by Hartmut König 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 Protocol Engineering by Hartmut König books to read online.

Online Protocol Engineering by Hartmut König ebook PDF download

Protocol Engineering by Hartmut König Doc

Protocol Engineering by Hartmut König Mobipocket

Protocol Engineering by Hartmut König EPub