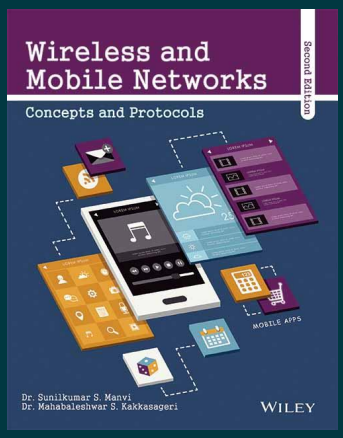
WILEY



Wireless and Mobile Networks, Concepts and Protocols, 2ed

By Sunilkumar S. Manvi, Mahabaleshwar S. Kakkasageri

Paperback 9788126558551 ₹957.00

Pages: 492

Description

The book provides an explanation on the wireless network concepts, architectures, protocols, and applications. It covers the wireless networks such as wireless body area network (WBAN), wireless local area networks (WLANs), wireless metropolitan area networks (WMANs), wireless wide area network (WWAN), wireless sensor networks, wireless vehicle networks and research challenges in wireless networks. The book addresses the design issues and explores various emerging protocols for wireless networks.

About the Author

Sunilkumar S. Manvi, Mahabaleshwar S. Kakkasageri

Dr. Sunilkumar S. Manvi is the Director, School of Computing and Information Technology, Reva University, Bangalore. He has published over 25 papers in referred national / international Journals and 70 papers in referred national / international conferences. Three of his papers “Agent technology applications in communications”, “Multicast Routing in MANETs by using Multiagent Systems” and “Intelligent Product information presentation in E-Commerce” were among the top downloaded articles published by Elsevier Journals “Computer Communications”, “Information Sciences” and “Journal of System software”, respectively.

Dr. Mahabaleshwar S. Kakkasageri is serving as a Associate Professor in the Department of Electronics and Communication Engineering, Basaveshwar Engineering College, Bagalkot, Karnataka.

Table of Contents

Preface

1 Fundamentals of Wireless Communication

1.1 Digital Communications

1.2 Wireless Communication System

1.3 Wireless Media

1.4 Frequency Spectrum

1.5 Technologies in Digital Wireless Communication

1.6 Wireless Communication Channel Specifications

1.7 Types of Wireless Communication Systems

2 Basics of Wireless Networks

2.1 Wireless Network

2.2 Wireless Switching Technology

2.3 Wireless Communication Problems
2.4 Wireless Network Reference Model
2.5 Wireless Networking Issues
2.6 Wireless Networking Standards
3 Wireless Body Area Networks
3.1 Wireless Body Area Network (WBAN)
3.2 Network Architecture
3.3 Network Components
3.4 Design Issues
3.5 Network Protocols
3.6 WBAN Technologies
3.7 WBAN Applications
4 Wireless Personal Area Networks
4.1 Wireless Personal Area Network (WPAN)
4.2 Network Architecture
4.3 WPAN Components
4.4 WPAN Technologies and Protocols
4.5 WPAN Applications
5 Wireless Local Area Networks
5.1 Network Components
5.2 Design Requirements of WLAN
5.3 Network Architecture
5.4 WLAN Standards
5.5 WLAN Protocols
5.6 IEEE 802.11p
5.7 WLAN Applications
6 Wireless Metropolitan Area Networks
6.1 Wireless Metropolitan Area Networks
6.2 WMAN Network Architecture
6.3 Network Protocols
6.4 Broadband Wireless Networks
6.5 WMAN Applications
7 Wireless Wide Area Networks
7.1 Cellular Networks
7.2 Satellite Networks
7.3 WLAN versus WWAN
7.4 Interworking of WLAN and WWAN
7.5 WWAN Applications

8 Wireless Ad Hoc Networks
8.1 Wireless Ad Hoc Networks
8.2 Mobile Ad Hoc Networks
8.3 Wireless Sensor Networks
8.4 Wireless Mesh Networks
8.5 Vehicular Ad Hoc Networks (VANETs)
9 Research Issues in Wireless Networks
9.1 Modulation
9.2 Radio Resource Management
9.3 Channel Allocation
9.4 Error Control and Coding
9.5 Congestion Control
9.6 Routing
9.7 Addressing
9.8 Network Access Control
9.9 Mobility Control
9.10 Flow Control
9.11 Security and Privacy
9.12 QoS Management
9.13 Power Management
9.14 Cross-Layer Control
9.15 Network Modeling
9.16 Traffic Modeling
9.17 Simulation Modeling
9.18 Network Measurements
10 Delay Tolerant Networks
10.1 Introduction
10.2 DTN Architecture
10.3 DTN Issues and Challenges
10.4 The Bundle Layer
10.5 DTN Applications
11 4G LTE Networks
11.1 Introduction
11.2 Long-Term Evolution (LTE)
11.3 LTE Architecture
11.4 Protocol Layer Architecture
11.5 LTE Advanced
11.6 5G Networks Overview

12 Wireless Network Security

12.1 Introduction

12.2 Wired Equivalent Privacy (WEP)

12.3 Wi-Fi Protected Access (WPA)

12.4 Robust Secure Network (RSN)

12.5 Virtual Private Network (VPN)

Ns-2 Simulator

Study of ns-2 Simulator

Installation of ns-2 Simulator

Hardware Required

Getting the Software

Installing the Package

Lists of Laboratory Experiments

Experiment 1

Experiment 2

Experiment 3

Experiment 4

Experiment 5

Experiment 6

Experiment 7

Experiment 8

Experiment 9

Bibliography

Index

To purchase this product, please visit:
https://www.wileyindia.com/wireless-and-mobile-networks-concepts-and-protocols-2ed.html

Scan to buy