

BLUETOOTH APPLICATION PROGRAMMING

WITH THE **JAVA APIS**



C Bala Kumar Paul J. Kline Timothy J. Thompson

BLUETOOTH® APPLICATION PROGRAMMING
WITH THE JAVA™ APIs

The Morgan Kaufmann Series in Networking

Series Editor: David Clark, M.I.T.

Bluetooth Application Programming with the Java APIs

C Bala Kumar, Paul J. Kline, and Timothy J. Thompson

Modern Cable Television Technology: Video, Voice, and Data Communications, Second Edition

Walter Ciciora, James Farmer, David Large, and Michael Adams

Policy-Based Network Management: Solutions for the Next Generation

John Strassner

Computer Networks: A Systems Approach, Third Edition

Larry L. Peterson and Bruce S. Davie

Network Architecture, Analysis, and Design, Second Edition

James D. McCabe

MPLS Network Management: MIBs, Tools, and Techniques

Thomas D. Nadeau

Developing IP-Based Services: Solutions for Service Providers and Vendors

Monique Morrow and Kateel Vijayananda

Telecommunications Law in the Internet Age

Sharon K. Black

Optical Networks: A Practical Perspective, Second Edition

Rajiv Ramaswami and Kumar N. Sivarajan

Internet QoS: Architectures and Mechanisms

Zheng Wang

TCP/IP Sockets in Java: Practical Guide for Programmers

Michael J. Donahoo and Kenneth L. Calvert

TCP/IP Sockets in C: Practical Guide for Programmers

Kenneth L. Calvert and Michael J. Donahoo

Multicast Communication: Protocols, Programming, and Applications

Ralph Wittmann and Martina Zitterbart

MPLS: Technology and Applications

Bruce Davie and Yakov Rekhter

High-Performance Communication Networks, Second Edition

Jean Walrand and Pravin Varaiya

Internetworking Multimedia

Jon Crowcroft, Mark Handley, and Ian Wakeman

Understanding Networked Applications: A First Course

David G. Messerschmitt

Integrated Management of Networked Systems: Concepts, Architectures, and their Operational Application

Heinz-Gerd Hegering, Sebastian Abeck, and Bernhard Neumair

Virtual Private Networks: Making the Right Connection

Dennis Fowler

Networked Applications: A Guide to the New Computing Infrastructure

David G. Messerschmitt

Switching in IP Networks: IP Switching, Tag Switching, and Related Technologies

Bruce S. Davie, Paul Doolan, and Yakov Rekhter

Wide Area Network Design: Concepts and Tools for Optimization

Robert S. Cahn

For further information on these books and for a list of forthcoming titles, please visit our website at <http://www.mkp.com>

BLUETOOTH® APPLICATION PROGRAMMING WITH THE JAVA™ APIs

C BALA KUMAR

PAUL J. KLINE

TIMOTHY J. THOMPSON

MOTOROLA SEMICONDUCTOR PRODUCTS SECTOR



MORGAN KAUFMANN PUBLISHERS

AN IMPRINT OF ELSEVIER SCIENCE

AMSTERDAM BOSTON LONDON NEW YORK
OXFORD PARIS SAN DIEGO SAN FRANCISCO
SINGAPORE SYDNEY TOKYO

Acquisitions Editor: Rick Adams
Associate Editor: Karyn P. Johnson
Publishing Services Manager: Simon G. Crump
Project Manager: Mamata N. Reddy
Designer: Eric DeCicco
Production Services: Graphic World Publishing Services
Composition: Expo
Illustration: Dartmouth Publishing
Printer: The Maple-Vail Book Manufacturing Group
Cover Printer: Phoenix Color

Permissions may be sought directly from Elsevier's Science & Technology Rights Department in Oxford, UK. Telephone: (+44) 1865 843830; FAX: (+44) 1865 853333; E-mail: permissions@elsevier.com.uk. You may also complete your request online via the Elsevier homepage (www.elsevier.com), by selecting "Customer Support" and then "Obtaining Permissions."

Morgan Kaufmann Publishers
An imprint of Elsevier Inc.
500 Sansome Street, Suite 400
San Francisco, CA 94111
www.mkp.com

© 2004 by Elsevier Inc.
All rights reserved
Printed in the United States of America

08 07 06 05 04 5 4 3 2 1

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system, without permission in writing from the publisher.

MOTOROLA, the Stylized M Logo and all other trademarks indicated as such herein are trademarks of Motorola, Inc. registered in the U.S. Patent and Trademark Office. The Bluetooth trademark is owned by its proprietor and used by Motorola, Inc. under license. Java and all other Java-based terms are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and other countries. All other product or service names are the property of their respective owners. © 2003 Motorola, Inc. All rights reserved.

Library of Congress Control Number: 2003107476
International Standard Book Number: 1-55860-934-2

This book is printed on acid-free paper.

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.