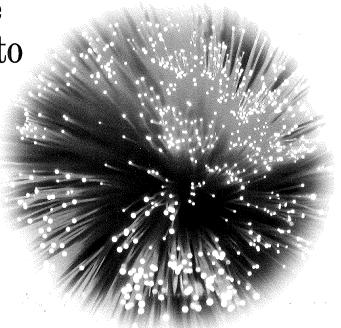
WILEY

Cracking the Code™

Instant Messaging Systems

Complete source code and design to create your own IM applications

Dreamtech Software Team



Instant Messaging Systems: Cracking the Code™

Published by Wiley Publishing, Inc. 605 Third Avenue New York, NY 10158 www.wiley.com

This book is printed on acid-free paper.

Copyright © 2002 by Wiley Publishing, Inc. All rights reserved.

Published by Wiley Publishing, Inc.

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as permitted under Sections 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 750-4744. Requests to the Publisher for permission should be addressed to the Permissions Department, Wiley Publishing, Inc., 10475 Crosspoint Blvd., Indianapolis, IN 46256, (317) 572-3447, Fax: (317) 572-4447, E-Mail: permcoordinator@wiley.com.This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold with the understanding that the publisher is not engaged in professional services. If professional advice or other expert assistance is required, the services of a competent professional person should be sought.

Wiley, the Wiley Publishing logo, and Cracking the Code are trademarks or registered trademarks of Wiley Publishing, Inc., in the United States and other countries, and may not be used without written permission. All other trademarks are the property of their respective owners. Wiley Publishing, Inc., is not associated with any product or vendor mentioned in this book.

Library of Congress Control Number: 2002106774

ISBN: 0-7645-4953-7

Printed in the United States of America.

10 9 8 7 6 5 4 3 2 1

1B/QW/QU/QS/IN



Contents

Preface	vi
Acknowledgments	X
Chapter 1: Introduction to Instant Messaging	1
A Brief History of Instant Messaging	
The Advantages of Instant Messaging	
The Need for Instant Messaging	
The Future of Instant Messaging	
Jabber Instant Messaging Model	
Introduction to the Instant Messaging Application	
Required Programming Techniques	10
Summary	14
Chapter 2: Designing the Instant Messaging Applicatio	n15
Application Design Considerations	
Database Design Considerations	16
Server Module Design Considerations	
Client Module Design Considerations	36
Application Communication Standards	40
Issues Involved in Creating the Session	45
Issues Involved in Closing the Stream	
Summary	47
Chapter 3: Instant Messaging Server (Java)	48
Java Web Services	48
Server Development	56
Inside the Server Application	63
Inside Java Web Services	91



xiv Contents

Technical Documentation	100
Summary	
Chapter 4: Instant Messaging Server (C#)	212
Web Services	212
Developing the Server	
Inside the Server Application	
Inside a Web Service	
Technical Documentation	
Summary	333
Chapter 5: The Instant Messaging Client (Java)	334
Basic Implementation of the Client	335
Establishing a Connection with the Local Server	339
Programming Client Requests	
Handling Responses	
Technical Documentation	
Summary	493
Chapter 6: Instant Messaging Client (C#)	494
Client Module Tasks	494
Server Responses	
Technical Documentation	519
Summary	623
Chapter 7: Enhancing Instant Messaging	624
Introduction to J2ME	624
Design Techniques	632
Programming Client Requests	
Handling Responses	
Summary	655
Appendix A: What's on the CD-ROM	657
Appendix B: Instant Messaging Software Resources	667
Index	669
Sun Microsystems, Inc. Binary Code License Agreement	





DOCKET

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.

