

Introduction

The business and academic worlds have long accepted the use of networking technologies, allowing users to share files and applications and to exchange information using network services such as e-mail. The continuing explosive growth of the Internet and the Web has made everyone conscious of the importance of networked applications, and this importance is increasing with the emergence of home, mobile, and sensor networks.

For the programmer, building distributed applications can be a complex business. There are issues related to network stability and accessibility involved, in addition to partitioning applications into portions that can run separately but still be linked into larger functional units. A variety of frameworks—both experimental and commercial—have been devised to make it easier to build and deploy distributed applications.

Service-oriented architectures (SOAs) have come to the fore recently as a means of structuring and linking components into distributed applications. There is much reinvention going on in this area, but people are beginning to realize that as long ago as 1998, Jini addressed and solved many of the issues that arise in building SOA systems. This has led to a resurgence of interest in what is all of a philosophy of building applications, an API, and an implementation.

Who This Book Is For

This book is aimed at the professional programmer who wants to build robust and reliable distributed applications. It assumes you have a background in Java programming and network programming. It also assumes that you are familiar with network concepts such as remote procedure calls, are familiar with Java syntax, and have a working knowledge of the Java core classes.

What This Book Covers

This is a hands-on, study-the-code book. My intention is to introduce you to code that can be readily understood and that can be copied and adapted for your own programs. The book covers the full range of Jini concepts, from the basics through to advanced topics, such as security, transactions, user interfaces, and linking Jini and Web Services.

This book originated from an online tutorial that began at ten pages in 1999 and has grown steadily since. In 2001, the tutorial was published as *A Programmer's Guide to Jini Technology* (Apress) and dealt with Jini version 1.1. Jini has continued to develop, and the tutorial has continued to evolve, so it's now appropriate to release this new edition covering Jini 2.1.

■ **Note** Jini 2.1 requires at least JDK 1.4, but it will also work with JDK 1.5.

The first nine chapters of this book deal with the basics of Jini programming, leading to a complete, but simple, application. The subsequent chapters discuss more advanced material. Most aspects of the Jini technology are covered, but of course there are always complexities that will take you beyond the bounds of this book. There is an active Jini mailing list, <http://archives.java.sun.com/archives/jini-users.html>, with many helping hands, if you find yourself in need of further assistance.