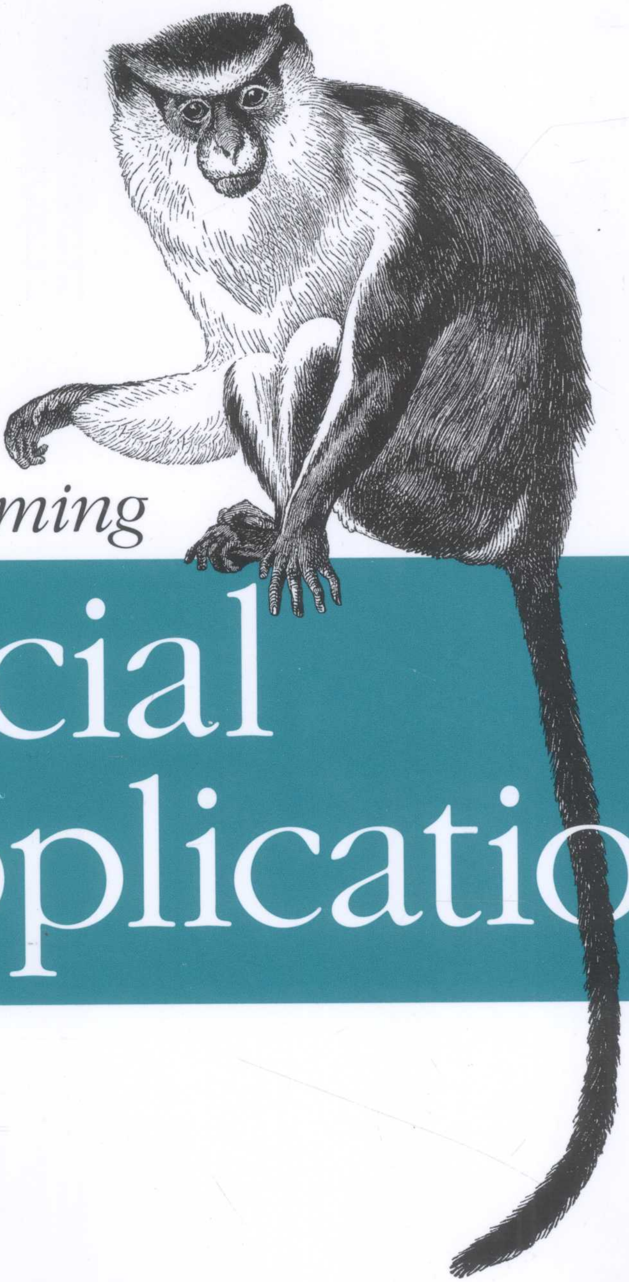
社交应用编程（影印版）



Programming Social Applications

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Jonathan LeBlanc 著

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Preface

I first began developing social applications when Facebook opened up its developer platform in 2007, giving people like me a taste of the extensive social data that an application can use to improve growth and target personalization settings. At the time, I was building social fantasy sports applications for *CBSSports.com*, pulling user information to enrich that fantasy sports data into a highly personalized state.

It wasn't until 2008, when I joined the partner integrations team in the Yahoo! Developer Network, that I got my first peek at an open source approach to social application development through OpenSocial. What attracted me to OpenSocial was not the fact that you could build an application once and deploy to numerous OpenSocial containers (which proved to be a faulty notion), but rather that through an open source approach I could build social applications on a container and understand how these platforms worked from a core level. I developed a deep drive to explore how the relationships that people form on the Web can enrich and personalize their online lives. This was the starting point of my career advocating open source social technologies.

OpenSocial was the gateway specification for me, leading me to explore the Shindig OpenSocial container, OpenID and OAuth (for authentication and authorization, respectively), the third-party code security technologies Caja and ADSafe, and newer distributed web framework specifications like Activity Streams, PubSubHubbub, and the Open Graph protocol. I quickly came to realize that there was a wide range of open source technologies to enable the construction of rich social frameworks. These technologies and specifications built rich layers of functionality in a simple way using very open methodologies.

These social technologies and specifications are what this book is about. Each chapter uncovers a new layer in the construction of highly viral social applications and platforms. We start by exploring the concepts behind social applications and containers, and then dive into the technologies used to build them. With the application basics down, we look at technologies to secure third-party code on a container, and follow with a discussion of how to secure user information and develop a standard login architecture for platforms. After exposing all of those complex layers, we take an in-depth look at distributed web frameworks that showcase standardization techniques for syndicating activities, discovering rich web and user data from sites and email addresses. And finally, we explore some wonderful upcoming standards in the social application world.

The content of this book comes from years of direct partner integration work emphasizing the power and features behind open source technologies while collaborating with other developers and companies to create rich social integrations with Yahoo!. This book is a labor of love, as I have both taught and learned from seeing firsthand how social integration technologies are applied to real-world applications and interactions.

Audience

Since this book touches on many different areas of social web application development, container specifications, architecture, and standards, the audience that it will appeal to includes a wide breadth of fields and proficiencies, including (but not limited to):

- Social web application developers who are building applications for Facebook, iGoogle, Orkut, YAP, or any other social networking site that hosts third-party applications
- Application platform architects and server-side engineers who are building products to host a socialized experience
- Frontend engineers who wish to leverage the customization and direct targeting afforded by the massive social graph derived from these technologies
- Hackers and part-time developers who are building small-scale personal projects off of the social web
- Followers of open source technology who want to understand how these technologies are being used to promote social sharing and standards
- Web developers and company teams who wish to develop membership systems and authentication security
- Security gurus and engineers who want to learn about security within online social experiences

Contents of This Book

This book covers many technologies and tools for working with the social web, from container and application development to building highly engaging social graphs.

Each chapter builds on the fundamentals you've learned in the preceding chapters' social explorations. Here are the overarching topics covered throughout the book, broken down by chapter:

Chapter 1
: Takes you through an overview of applications, systems, and open source fundamentals to give you a good foundation for implementing the technologies in the remainder of the book.

Chapter 2
: Explores the concepts behind the social graph, breaking it down into its fundamental properties.

Chapter 3
: This chapter forms the base of our social application development, walking you through the construction of a social container to host third-party applications.

Chapter 4
: Examines extensions and features built into the OpenSocial JavaScript libraries.

Chapters 5 and 6
: These chapters offer a deeper exploration of the OpenSocial specification. We will look at the core social aspects of a social platform, from the social graph implementation to the data architecture model.

Chapter 7
: Our final OpenSocial chapter will dive into advanced OpenSocial topics such as templating, data pipelining methods, and the future of OpenSocial.

Chapter 8
: Covers third-party code security models and how a container can protect itself and its users against malicious code using frontend security systems.

Chapter 9
: Explores user and application authorization through OAuth, diving into both OAuth 1 and the newer OAuth 2 specification.

Chapter 10
: Details experimental and new technologies being developed for constructing social graphs, activities, and distributed web frameworks.

Chapters 11 and 12 (Chapter 12 available online)
: These final chapters look at user authentication and authentication security through the use of OpenID and the OpenID OAuth hybrid extension.

Chapter 12, the Glossary, and the Appendix are available on this book's website (*http://www.oreilly.com/catalog/9781449394912*).

Using an Open Source Technology Stack

Since this book's major focus is teaching the fundamentals of social application, container, and graph development using an open source stack, it is only prudent that I outline the technologies we will examine.

The major set of open source technologies we will explore in this book includes:

- OpenSocial for exploring the social graph and application development
- Shindig and Partuza as container implementations using OpenSocial
- OAuth for secure application and user authorization
- OpenID for user authentication, including the hybrid OpenID OAuth extension
- Caja and ADsafe for securing frontend code
- The Open Graph protocol to explore social web entities
- Activity Streams as a foundation for delivering activity content
- WebFinger as a means of discovering public user data using email addresses
- OExchange as a means of sharing any URL with any other web service on the Web
- PubSubHubbub as a means of syndicating user conversations from a root provider to multiple subscribers
- The Salmon protocol for taking the foundation of PubSubHubbub and unifying conversations between publishers and subscribers

As we explore this open stack, we will compare the technologies with many of the current proprietary standards used in the industry today. This will give you a good overview of both the potential and the implications of using open source fundamentals.

Conventions Used in This Book

The following typographical conventions are used in this book:

Plain text
: Indicates menu titles, menu options, menu buttons, and keyboard accelerators (such as Alt and Ctrl).

Italic
: Indicates new terms, URLs, email addresses, filenames, file extensions, pathnames, directories, and Unix utilities.

`Constant width`
: Indicates commands, options, switches, variables, attributes, keys, functions, types, classes, namespaces, methods, modules, properties, parameters, values, objects, events, event handlers, XML tags, HTML tags, macros, the contents of files, or the output from commands.

`Constant width bold`
: Shows commands or other text that should be typed literally by the user.

`Constant width italic`
: Shows text that should be replaced with user-supplied values.

This icon signifies a tip, suggestion, or general note.

This icon indicates a warning or caution.

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