Jason Roberts

director 6

▶ **D E M Y S T I F I E D**

THE OFFICIAL GUIDE TO

Macromedia Director,
Lingo, and Shockwave

FOREWORD BY
BUD COLLIGAN,
CHAIRMAN OF THE BOARD
OF MACROMEDIA, INC.

INCLUDES WINDOWS/MAC CD-ROM

DIRECTOR 6
DEMYSTIFIED

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JASON ROBERTS

macromedia®
PRESS

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The Official Guide to Macromedia Director, Lingo, and Shockwave

Jason Roberts

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FOREWORD

Some books are meant to be read once, then passed on or recycled. Others have enduring value, and as such command space on your bookshelf. But it's a rare book that's useful enough to earn a spot not on the shelf, but right next to your computer.

Director 6 Demystified is one of those books. If you're unfamiliar with Macromedia Director's myriad features, these pages will orient you. If it's time to learn Lingo, look here for instruction relevant to programmers and non–programmers alike. If you're an experienced multimedia hand looking to push your skills to the next level, this book may well give you the boost you need. And if you need a term defined or a concept clarified, this is a volume worth reaching for.

When we launched Macromedia Press, we sought to develop titles that would augment rather than recapitulate the documentation, providing a new degree of detail and the added dimension of practical experience. I think you'll agree this fits the bill admirably.

Bud Colligan
Chairman of the Board
Macromedia, Inc.

INTRODUCTION

ADVENTURES ON THE LEARNING CURVE

"LIFE BEING VERY SHORT, AND THE QUIET HOURS OF IT FEW,
we ought to waste none of them in reading valueless books."

—John Ruskin (1819–1900)
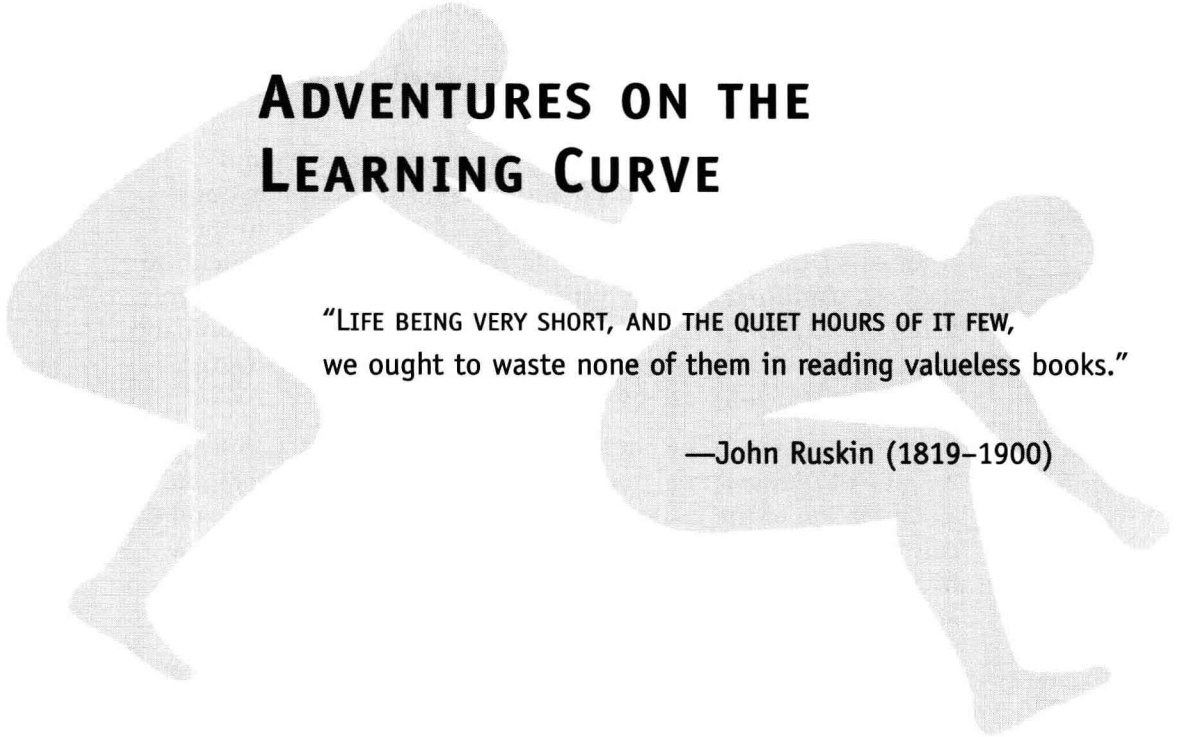
HELLO! (WHAT YOU'RE IN FOR)

This is a book about Director, the multimedia authoring software created and marketed by Macromedia. That shiny round thing on the inside rear cover is an interactive CD–ROM, packed with learning materials, samples, and resources for creativity. Together, the book and CD–ROM comprise a multimedia approach to (ta da!) multimedia.

This is a cross-platform book, appropriate for both the Windows 95 and Macintosh (MacOS) operating systems.

Director is marketed in versions for the Windows 95 and Macintosh operating systems (referred to throughout this book as MacOS). The two products are remarkably similar, with the commands, menus, and underlying principles practically identical for both platforms. Although the screenshots for this book were taken on a Macintosh, all the information applies to Windows and MacOS alike. In the few instances where the platforms diverge, separate instructions are given for each.

In the pages to come (and on that shiny disk), I'll try to live up to the title of *Director 6 Demystified*. It's more than a nifty alliteration, it's a summation of the goals of this project. Both the interface and the concepts behind Director can be pretty intimidating, and all the hype about multimedia in general seems to breed a lot of confusion and muddled expectations.

My task is to slice through the abstractions and buzzwords and get down to business. Director may seem like a monolithic Development Platform, but ultimately it's just a tool, one that works as well in your hands as in anyone's.

What's new in this edition?

If you're familiar with previous editions of this book, you may want to know if it's worth purchasing this one. My answer is an unqualified *yes* (and I'm not just grubbing for royalties). Each edition of *Demystified* represents a substantial revision and expansion, but this time we've really gone whole hog. The volume is now expanded into three books:

- **Book One: Director Essentials** focuses on mastery of the mechanisms of Director—how to build a working familiarity with all of its features and build full–fledged productions complete with animation, sound effects, and a degree of interactivity. If you've never used Director before, you'll find it invaluable. If you're an old Director hand, you'll still find it a worthwhile refresher: the interface in Director 6 departs significantly from that of earlier versions, so that you may find yourself not knowing your way around.

- **Book Two: The World of Lingo** eases you over the next major stumbling block on the learning curve: gaining a firm understanding of Lingo, Director's powerful scripting language. Unlike some other books on Director, this one doesn't shy away from the topic. Everything you need to gain proficiency in Lingo is here, from basic tutorials to advanced scripting exercises. And if you've never worked with a computer language before, you'll probably appreciate the in–depth discussion of the concepts behind programming. Don't know a property variable from a Plymouth Valiant? This book will clue you in.

- **Book Three: The World of Shockwave** explores the new realm of web–based capabilities offered by Director 6—which includes (but isn't exclusively) the playback technology known as Shockwave. If your impression of Shockwave is that it's a simple online animation tool, you're in for some surprises: Macromedia has gone all-out to make Director a full–fledged Internet authoring tool, with powerful new network–savvy Lingo, broad media integration skills and new streaming methods that minimize download delays.

- A fourth section is also included: an assortment of useful **appendices** for everyday reference. One, the "Lingo Lexicon," is practically a book in itself. In it, Lingo terms are defined by type (which are thumbmarked for easy access).

If you're reading this in the store...

Perhaps you're standing in a bookshop or computer emporium leafing through these pages, asking yourself, *Is this something I should buy?* Here are a few points that might help you decide:

- These pages can take you on quite a journey. The information and exercises should take you from a raw beginner to the someone able to author your own interactive CD–ROMs, web pages, and other professional–level applications. I don't promise that it'll make you an absolute whiz, but we will cover many of the techniques used in commercial multimedia today.

- If you don't already own a copy of Director 6, a save–disabled demo version is included, as are demos of several other useful applications.

- Once you're finished reading the book, it makes a great paper-weight (and the shiny disk is good for signalling to aircraft passing overhead). Actually, this book is designed to have three lives: as a tutorial series (with multiple exercises), as an inspira-tion tool (see the Project Profiles), and as a reference work (hence the substantial appendices).

If you've already bought this book...

… you don't need a sales pitch. What you need to know is this:

- The book has three types of information. The **chapters** contain graduated tutorials, with plenty of examples and hands–on exercises. Interspersed with the chapters are a series of **project profiles**, in–depth examinations of sample Director files (included on the CD–ROM). Finally, the **appendices** provide useful reference resources, including a troubleshooting guide and a Lingo lexicon.

- Each chapter begins with an **introduction** and ends with a "Points to Remember" **summation** of the terms and principles introduced in that chapter. In other words, I say what I'm going to discuss, then I explain it, and then I describe what I just explained. If my professors hadn't used a similar technique, I'd never have made it through college.

- **Cheating** is encouraged! There are completed versions of every tutorial tucked away on the disk. If you're unclear on a concept or procedure, go ahead: open up the "Final" file, and take a look under the hood. But try to do it when you truly need illu-mination, not when you're simply impatient. There's no substi-tute for doing the work yourself.

HOW TO USE THIS BOOK AND DISK

You could start with Chapter 1 and work your way through to Chapter 23, dipping into the CD–ROM only when directed to do so. But why opt for the boring linear approach to learning a non–linear medium? Instead, I recommend taking the following steps:

- *Play.* Ignore the text at first. Just fire up the CD–ROM and mess around with whatever strikes your fancy. Play the arcade–style game *Simple Invaders*. Pick up some martial–arts pointers from *Kumite*. Or experience the avant–garde interface of the *Oingo Boingo Promo*. They were all created with Director, so you'll be getting a feel for the software's creative potential—while having fun.

- *Peruse.* Skim the chapters, not bothering to do the exercises or even absorb the jargon. You'll get used to seeing the workings of Director in many manifestations, and you'll get a clearer picture of the conceptual terrain ahead.

- *Plow through.* Once you're comfortable with the format and inspired by the examples, start at the beginning and run through the exercises chapter by chapter. As you progress, you may find that new levels of knowledge give you fresh ideas for real-world projects. You might want to have a notebook handy to write down your bright ideas, so as not to get too side-tracked by the glittering potential unfolding before you.

What the symbols mean

Like most computer books nowadays, *Director 6 Demystified* employs a bit of custom iconography to guide the roving eye:

TIP

This indicates a helpful *suggestion*—not something that you necessarily have to pay attention to, but a bit of advice. Pertains not only to Director, but to other software as well.

This is the **Fast Forward** symbol, indicating a useful shortcut, such as a keystroke alternative to a menu command.

No, this doesn't mean "Look out above you!" It's the **key concept** icon, and when it shows up on the page it means: Pay Attention. This is Important Stuff to Remember.

The checkmark is a **reminder**, meant to head off possible problems before they arise. Usually they point out common misconceptions or oversights, not potentially serious errors.

The **see elsewhere** arrow points you to other sections in the book and CD–ROM. It's often an indicator of where a topic is discussed more fully, or where a file illustrating a principle can be found.

The **explanation** icon indicates a curiosity–quenching passage— not a tip or a warning, but a bit of background.

The **Try** icon denotes an optional activity that might further illustrate a feature or principle.

The **new feature** icon indicates that the action or function being discussed was either new or significantly revised with Version 6.0. As some of the differences are substantial, those of you familiar with earlier versions (up to 5.0) should make a point of reading these.

The **Windows** and **MacOS** icons call attention to information specific to each of those platforms.

The **Yikes!** symbol pops up only when real caution is necessary—when a misstep or oversight could lead to data loss, massive time-wasting, legal problems, or other hassles. Ignore at your peril.

Most of the icons draw your eye to statements in the margin of the pages, but others point to sidebars like the one you're reading right now. The format distinction is primarily one of length.

In addition to the icons, *Director 6 Demystified* has a cast of characters ... well, *one* character, to be exact.

MEET SWIFTY:
This energetic fellow is actually a font, adapted from the pioneering photographs of Eadweard Muybridge.

This character is named **Swifty**, an apt appellation for someone as mobile and agile as he. Swifty is the star of most of the tutorials, and I mention his name not to be cutesy, but because I'll be referring to him directly in pages to come, saying "place Swifty on the Stage,"

rather than "place the animated sequence of the little walking man on the Stage."

Swifty is actually a collection of symbols of a human figure (walking, running, jumping, etc), stored in font form. The font is included on the CD–ROM, so you can install it in your system and use it not only on your screen but also in high–resolution Postscript output. It was created by Christopher Bird, who based it on the historical work of Eadweard Muybridge (yes, that's how he spelled it). Muybridge was the nineteenth–century artist/inventor who first used a sequence of cameras to capture authentic motion, thus paving the way for the motion picture. We used some of his classic images for the cover of this book.

The CD-ROM component

Although the book is enhanced by the companion disk, you don't need a CD-ROM drive to learn from the text. Many of the exercises are built from scratch; others are based on materials included on the CD-ROM, but you have two options when it comes to getting those materials into your computer: you can use someone else's CD-ROM drive to transfer the folder called "Tutorial Materials" to a floppy disk (its contents will fit on a single high density floppy). Other files will require higher–capacity storage media, but none of the contents are copy protected. The other option is to download the tutorials from the "Demystified" website (see below).

If you opt for either of these, you may still eventually want to have a CD–ROM drive at your disposal (if only temporarily). Many of the contributors to the disk have not only created some pretty amazing stuff, they've graciously submitted their work in "non–protected" form. That means you can muck about in their files and see not only what they did but exactly how they went about doing it.

But that's not all. The CD–ROM also includes hundreds of megabytes of raw materials for multimedia: fonts, music files, texture backdrops, even animated buttons ready for cutting and pasting into your own productions. Lots of books nowadays feature discs with a dumping of "shovelware" to fill them up, but the contents

of this one were carefully selected to be useful. The disc is a lesson in itself, too—the entire user interface is in open–code form, ready for inspection.

Although the contributors to the Gallery section of the CD-ROM have provided their projects in "open" form, they haven't given up the copyrights to their work. That means that you can browse through their files, learn from them, and copy them onto your hard drives—but please don't plunder them for your own projects. On the other hand, the resources in the "Clip Media" and "Shareware" sections are yours to use as you please.

The Demystified.com website

As version 6 amply demonstrates, Director has become much more than an animation application. It's now a full–fledged web/Internet development environment, able to integrate media spread in a worldwide network as easily as it can coordinate files drawn from your hard drive. That's why with this edition we've introduced a dedicated website: **http://www.demystified.com**.

This site serves a number of purposes:

- It's a online location for **_networked media_**. In the latter part of this book, you'll find exercises that download and manipulate media stored here. You can, of course, perform such snazzy web tricks anywhere, but this way the learning process is simplified.

- It's a **_bulletin board_** for late–breaking information on Macromedia Director (bug fixes, new versions, etc.) and its related technology.

- It's a **_forum_** for corrections/clarifications/enhancements to this book. If you're puzzled by something in these pages, check out the site: we may have something that clears the matter up. If we haven't, drop me a line and let me know.
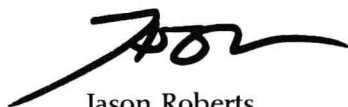
THE FEEDBACK LOOP (WHAT I'M IN FOR)

This is the third edition of *Director Demystified*, and as future editions materialize I'd like to incorporate as much user feedback as possible. If there are topics you'd like to see covered, passages that could be clarified, or errors requiring obliteration, please let me know. And if you create exemplary Director examples or useful support files, why not share them with future learners? Contributors will be thanked by name in future editions, and major contributions will be acknowledged with free copies as well.

My email address is below. I'd enjoy hearing from you, but please understand that I can't respond to every request for Director or Lingo advice. I'm flattered by the number of messages I receive asking me to troubleshoot projects, but I regret that I'm usually not able to oblige in the scope of casual correspondence.

One last word of encouragement: Director doesn't have many limitations, but that can be daunting in itself: it can get a little dizzy on the steep slope of the learning curve. But it's a journey well worth taking, because the program's complexity translates directly into an amazing degree of versatility.
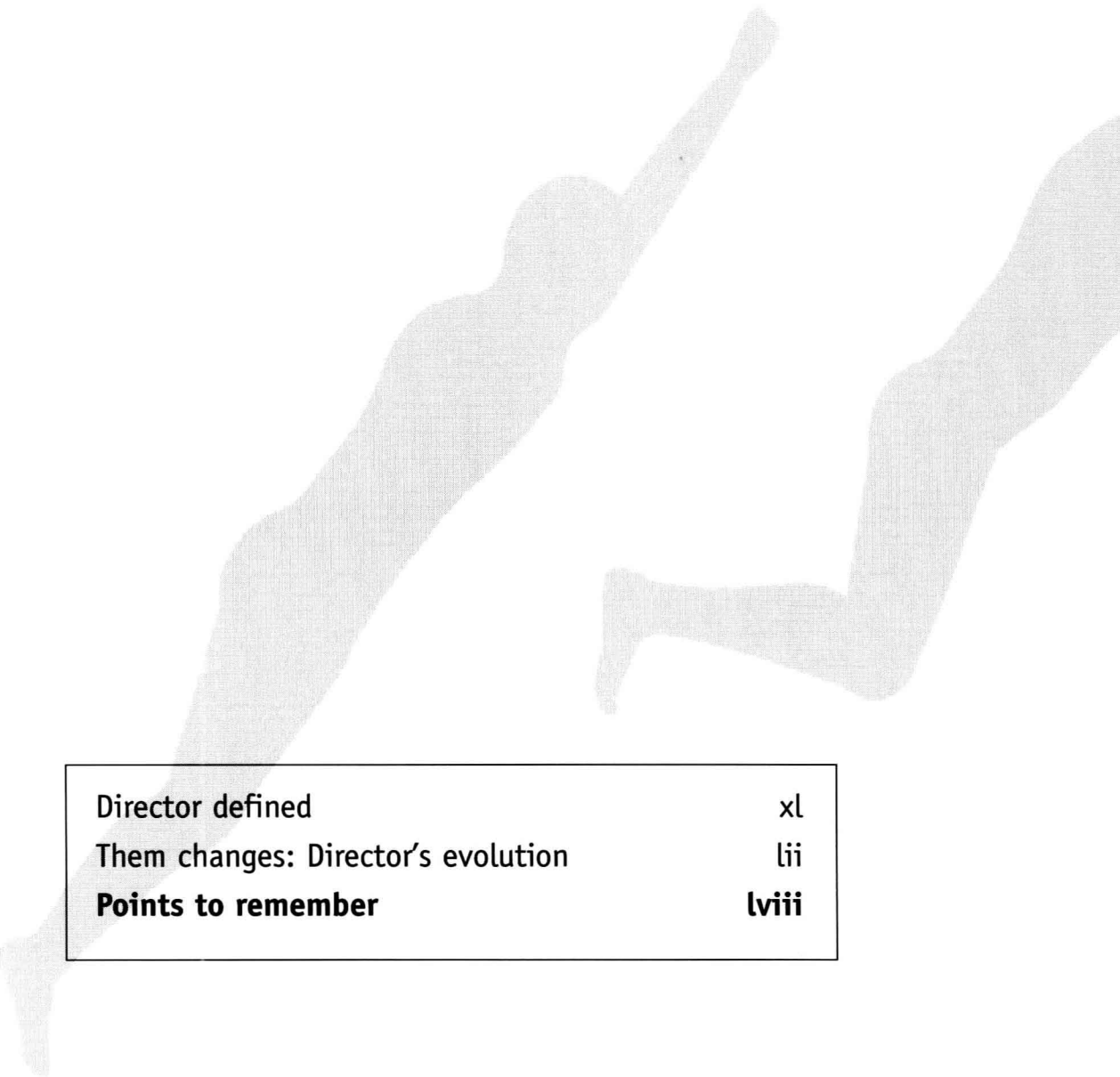
It's up to you to turn that versatility into true creativity.

Have fun!

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