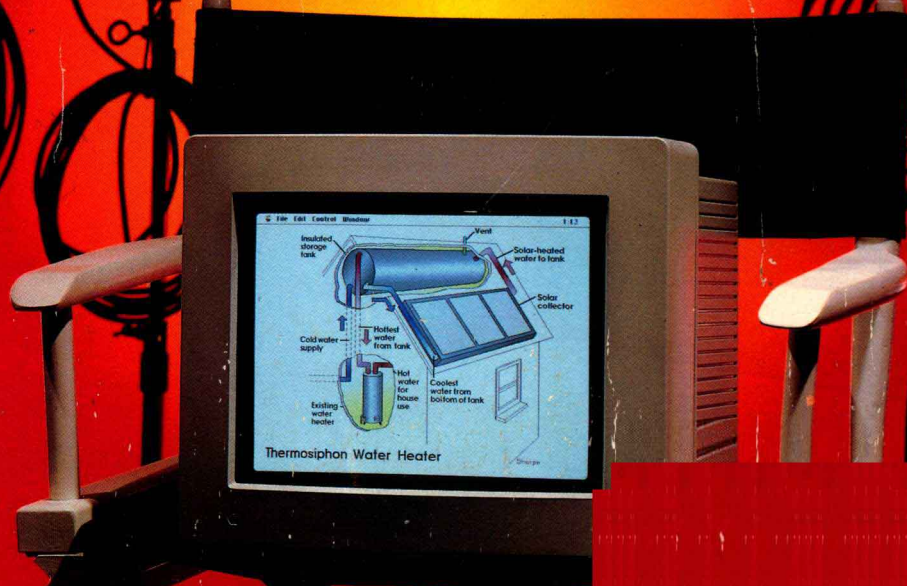


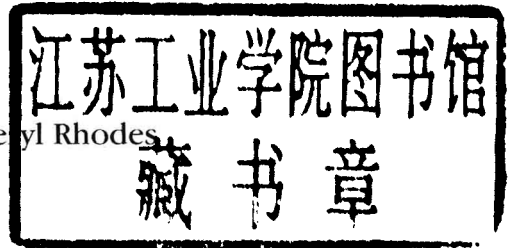
# USING MACROMIND DIRECTOR®



que®

# Using MacroMind Director

Tony Bove & Cheryl Rhodes



Que® Corporation  
Carmel, Indiana

# Using MacroMind Director

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Library of Congress Catalog Number: 90-61532

ISBN 0-88022-578-5

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93 92 91 90 5 4 3 2 1

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## **About the Authors**

Tony Bove and Cheryl Rhodes write books on computing, graphic arts, and desktop publishing. They publish a monthly industry report, *Bove & Rhodes Inside Report on Desktop Publishing and Multimedia*, which has provided in-depth analysis of desktop publishing and multimedia technologies and products since 1986.

Bove and Rhodes co-founded *Desktop Publishing*, the first magazine about the subject, which was renamed to *Publish!* when acquired by PCWCI, a subsidiary of the International Data Group (IDG). They have written books about Aldus PageMaker, Adobe Illustrator, Macintosh-based desktop communications and networking, desktop publishing on Macintosh and PC-compatible computers, WordStar, and CP/M and Radio Shack computers. All books were produced with desktop publishing methods.

Bove and Rhodes contribute regularly to *The Chicago Tribune* (Sunday Technology section) and are contributing editors for *Computer Currents* magazine. They are considered old-timers in the computer business, having founded and edited *User's Guide* (a magazine for CP/M computer users) and *DataCast* magazine (for software and telecommunications users) in 1981 and having edited *Portable Companion* magazine for Osborne Computer Company.

Tony Bove started using computers for publishing in 1976, contributing articles and reviews to several magazines including *InfoWorld*, *PC World*, *The Whole Earth Software Catalog*, and *The Whole Earth Review*. As a writer of technical manuals and tutorials on how to use computer systems, he won a Society for Technical Communications first prize award for a software reference manual.

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## Acknowledgments

We'd like to thank the many people who represent all of the companies mentioned in this book for providing timely information and demonstrations of their products.

In particular we'd like to thank the multimedia artists, project members, and associates who participated in our research and provided many examples of their work. Thanks, Animatrix, David Goldman, Jonathan Gibson, Jenny Gale, Michael Gosney, Grafica Multimedia, Linno Llenos, Gabriella McGrath, Michael McGrath, Marney Morris, Robert May, Mark Pierce, Roy Santiago, Stuart Sharpe, Payson Stevens, and Lynda Weinman.

The folks at MacroMind have been extraordinarily helpful. We thank Marc and Devorah Canter, Geoff Brown, Nat Goldhaber, Miles Gilburne, David Jacobs, Eric Larson, Jennifer Lipson, Jaime McNeely, Al McNeil, Dan Michael, Erik Neumann, Jeff Parker, Dan Sadowski, John Scull, Jeff Tanner, John Thompson, Scott Walcheck, Chuck Walker, David Weinberg, and Don Whitt.

We'd especially like to acknowledge the help of Linda Stone, David Szetela, Renee Rodrigue, Keri Walker, Doedy Hunter, Ric Jones, and all the folks at Apple Computer.

Of invaluable assistance and deserving of recognition are the staff of Que Corp., including Lloyd Short, Karen Bluestein, Shelley O'Hara, Jodi Watson, and Kelly Dobbs.

Thanks are owed to our negotiators, Bill Gladstone and the staff of Waterside Productions, and, bottom line, to Louis Bove for his undying encouragement.

This book is dedicated to Aryeh Samet Canter and John Paul Bove, the next generation multimedia artists.

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# Foreword

As I look back over the past six years, MacroMind Director (and its predecessor VideoWorks) have been used for almost every type of multimedia project you can imagine: trade show displays, interactive sales presentations, guided tours for the Macintosh and a host of other applications. Developers around the country—and around the world—have picked up Director and combined it with some of the other tools available on the Macintosh to create a whole new communication medium. Nothing in words can express my excitement and amazement over the wide range of presentations and products that our users have created with Director. But the number one reason why I think Director has had such an influence in today's multimedia market, is its remarkable ease of use compared to other multimedia animation systems.

Professional users who have been exposed to traditional cel animation stands, or computer controlled slide shows, love Director's real-time interactive responsiveness, and especially appreciate the immediate feedback aspects of its notational editing system. The time line featured in Director's user interface is a direct representation of time; and after all, time is what animation, sound and video are all about.

Time, as represented by the score in Director, is the single aspect that differentiates multimedia from flat media, such as paper. Time is the insight that once you understand, you'll never forget. Time is the element of Director's user interface that I think most people latch onto almost instantly; "Oh, I get it, *this* comes before *that*, but after *this*. And *that*'s what's going on at the same time."

It's the combination of Director's time-line score and its WYSIWYG (what-you-see-is-what-you-get) layout capabilities that creates an intuitive system for multimedia composition. When we first created VideoWorks, we felt that users would want to see their entire time-line sequence represented, while at the same time see the particular instance of time that they were 'at'.

By combining the direct manipulation of objects (whether they are text, graphics, or drawings) in space (on the screen), with a direct representation of time (in a spreadsheet-like score), we felt that we could leverage off some of the best aspects of the Macintosh user interface. The score enabled users to drag and select ranges of time, just like they selected ranges of cells in a spreadsheet, and the stage enabled users to lay out and place objects on the screen, just like MacDraw (or the later PageMaker).

It all seemed to make perfect sense to us back in 1984, but then again everything was simpler then. We only had 128k of memory to work with, so in those days 64 castmembers was plenty. 24 channels also seemed quite adequate in those days. But now, and certainly for the future, we realize that there should be no boundaries to what someone could do with Director. —

You should only be limited by your imagination when you're using Director. Now that Director can record onto videotape one frame at a time, there is literally no difference between what your Macintosh and a few peripherals can do compared to a professional, multi-million dollar animation studio. Creating 24 bit animations with Director is equivalent to using a Quantel Harry and Paintbox, together with a few special effects devices.

But of course that's not enough. We designed Director to go beyond what traditional animation systems can offer. Director enables you to create interactive documents—applications that let you browse through information, randomly jump around a presentation—for a gamut of uses from presenting study materials for review to a young learner, to training an experienced professional. Director enables you to create interactive marketing brochures for distribution by mail, or for setup as a kiosk in a shopping mall. Most importantly, Director gives an artist the interactive programming capabilities of HyperCard (or other authoring systems), by simply using 'go to' commands.

Solving the artists' needs has always been MacroMind's focus. Not surprisingly, MacroMind is made up almost entirely of artists, musicians and actors; people who are patiently doing their day jobs, but really waiting for their moment in the sun, their day on the stage of life, their 15 minutes of stardom. We've always used our products ourselves, of course for marketing and sales presentations, but also as training disks for our products and as a means of simulating our next generation products. And of course we've tried to create great art with Director, synchronizing

our animations, artwork and interactive environments with state of the art MIDI composed rock music and new age ballads.

I'll always remember an image I had when we first started MacroMind. I felt that even if the company didn't take off, that we'd at least have some monster tools that I could go off onto a mountaintop and use. At the time, we (the three founders of MacroMind) were working for Bally/Midway, the giant videogame company.

We were using fairly advanced tools for the day (our own version of FORTH, with special editors for alien attack formations, mother ships or sound effects), but these editors still lacked some of the obvious enhancements that we really needed. So when the Macintosh came out, it seemed like the right thing to do to create a series of SoundVision™ tools that could be used for videogame development work, (and start a company at the same time).

These original tools became VideoWorks and MusicWorks and the rest is history, but the moral of the story is that we were originally inspired by the high-end, expensive tools that were used in professional video and audio recording studios. We felt that desktop computers would eventually be able to do everything these expensive machines could do, but that the software for these machines was impossible to use, often requiring a C programmer (or Pascal programmers in those days) to accomplish anything.

Our goal was to create tools that were as powerful as those professional tools, but as easy to use as videogames. Of course it has been a long road, but I think we're finally getting real close to reaching that ideal. Technology will continue to become cheaper over time, and it's MacroMind's role to bring high-end workstation-based tools down onto the desktop and to make those tools accessible and easy to use. Someday we will have the same software tools to run on hardware that costs \$250, \$2,500, \$25,000 and \$250,000. The key will be to be able to move our documents around between each of these systems and to have the software work identically regardless of the environment.

Over the years there have been many attempts to write a book about VideoWorks or Director. I even tried to do one myself in 1986, only to find out that we were a little too early for the industry. Tony and Cheryl have stuck with it, climbing over all the obstacles, and have created a book I can be proud of. Of course I think our manuals are pretty good, and hopefully none of you will forego reading our manuals thoroughly, but this book will give you a complete multimedia solution that will help you

make decisions about all the accompanying pieces of hardware that Director controls so very well.

In closing, I want to tell you of another story that really changed my life, and set VideoWorks and Director onto the course that they remain on today. We were selling VideoWorks for \$100 at the time (1985) and positioning it as a tool for education and fun (we dubbed it “creativity tools”). At one MacWorld Expo, an engineer walked up to me and showed me the animation he had just created for work. On the screen I saw synthetic fiber molecules flying through the air and forming into some sort of Helix shaped cluster. Suddenly I realized A) how Nylon was developed, B) that there were many other ways to use animation, and C) that we had to position VideoWorks (and now Director) as a visualization tool for communications, learning and technical professionals who needed to implement their ideas without spending a fortune.

That underlying image has driven MacroMind since 1985, and very much inspired the publication of this book. Visualization is really why computers were invented in the first place. Computers help humans solve problems and communicate ideas, without having to fly to the moon or journey to the bottom of the oceans. I Hope you will find hours of enjoyment and fulfillment not only with MacroMind Director, but also with this book. Good luck.

Marc Canter, Chairman

MacroMind

San Francisco, CA

7/25/90

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# Introduction

*Animation can explain whatever the mind of man can conceive.*

—Walt Disney

MacroMind Director evolved from a humble beginning in 1985 as a program for creating on-screen animation (then called VideoWorks). It is now a program that combines sophisticated animation tools with facilities for integrating text, sound, images, animated sequences, and full-motion video into a multimedia presentation or information product. It also includes features for navigating through information in an interactive, non-linear fashion, and a fully-featured programming language used for “authoring” or “scripting” interactive information products and presentations.

We first heard the term “multimedia” used to describe an artistic performance involving the use of multiple media—music, film, projected images, dance, mime, and even printed material. As video became a medium for art, the term was extended to include the use of video (which includes sound) and animation.

As computers filtered down to the art world as production tools, they also were recognized as creative tools. Computer-generated graphics became a new medium for art, as well as a medium for business presentations. The personal computer, arriving in the 1980’s as an inexpensive information tool and causing dramatic changes to occur in the office, evolved to be capable of playing animation and sound as well as displaying high-resolution graphics. The term “multimedia” was reborn as a description of computer-generated animation, sound, and even video.

If you have the opportunity to communicate an idea effectively, you can change the world, or at least your part of it. The purpose of this book is to explain and show by example how you, as a MacroMind Director user, can create materials for multimedia projects, and how you can use a personal computer as an interactive medium for communicating ideas.