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Multimedia in Action!



LINDA TWAY

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- CD-ROM contains demo versions of leading multimedia titles and development software.

Multimedia in Action!

**Linda Tway
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AP PROFESSIONAL

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Acknowledgments

In the course of writing a book, it is inevitable that many other people play a role. In this book, an unusual number of people helped make the various pieces all come together. To accurately describe the development of the multimedia titles profiled in this book, I interviewed nearly 25 people from 16 companies and organizations. In addition, many others who work with them provided information and software, and served as liaisons, which greatly facilitated my interviews. In the interest of accuracy, I asked each person I interviewed to read and approve what I had written before I submitted it to my editor. Even the most conscientious efforts can result in occasional “glitches” in communication. And I must admit that a few people I interviewed relayed such humorous anecdotes that I wanted to be certain that I could pass those stories on to you. In addition, many companies provided demo versions of multimedia software for the accompanying CD-ROM.

Before I acknowledge all those who helped with this project, I must first thank my editor, Jenifer Niles. She showed extraordinary patience and understanding regarding the complexities of coordinating the various aspects of this project and made every effort to facilitate the completion of this book. I am also grateful to Mike Williams, Gnomi Gouldin, Karen Pratt, and Jacqui Young at APP for assisting with various aspects of the project.

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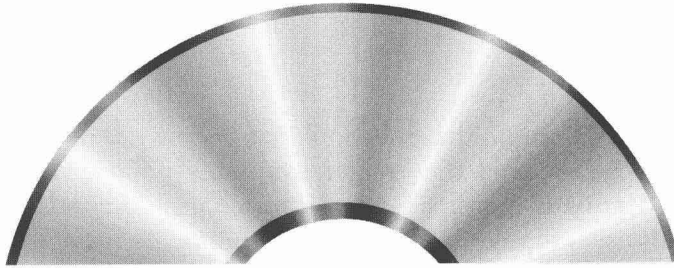
Byron Preiss Multimedia provided valuable insights into the strategies needed to make an electronic version of a classic book such as *Frankenstein* and *Slaughterhouse Five* much more enriching than the original version.

And I thank Gary Chapman of Imagix Productions for sharing his experiences as a consultant developing multimedia applications for other companies. His associate Gary Holley also spent time explaining his role in the development process.

Numerous companies provided demo versions of multimedia development software to be included on the CD-ROM for this book, and I am grateful to all of them as well. These companies are Adobe Systems, Future Vision Multimedia, Gold Disk Software, Gryphon Software, HSC Software, Lenel Systems International, Macromedia, North Coast Software, and Turtle Beach Systems.

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Purpose of This Book

Anyone embarking on a new enterprise is inevitably faced with a certain amount of ignorance—not from a lack of intelligence but from a lack of insight and experience. This is particularly true of an enterprise involving state-of-the-art and rapidly changing technology such as multimedia. Unfortunately, lack of insight and experience can undermine the success of that enterprise. Many savvy business people are convinced that it is not always best to be the “first,” because this places the burden (which translates into cost) of research and development (R&D) on the leading-edge company. Although being “first” may preclude initial competition, it also involves a greater risk of making mistakes (and paying dearly for them).

Companies that “follow” are in the enviable position of learning from the efforts of pioneering companies, even though the follower may be taking on a large and successful competitor by the time it enters the race. Naturally, not all companies that have pioneered a technology are willing to divulge much information about their endeavors, but those who are can provide valuable guidance to companies launching similar projects.

I have some personal experience in the burden of R&D in the area of artificial intelligence (AI) a decade ago. At that time, AI software was not only very expensive (\$5,000–\$10,000 was not an unusual cost for software that fit onto a single medium-density $5\frac{1}{4}$ " disk—bugs and all), it was also pretty scarce and had a steep learning curve. Those companies from which one could purchase AI software were apt to go out of business very quickly. I was fortunate that my early tenure in R&D was spent with the University of California, and the projects on which I worked were funded through various research grants. Since the time I formed my own software development company in 1989 for AI and multimedia application development, I have become even more painfully aware of the cost of R&D (it comes out of my pocket now), and I am particularly grateful for the generous advice and guidance of others who have led the way through their own application development.

It is with this in mind that this book has been written. The drop in multimedia hardware costs and the greater availability and usability of multimedia software have made multimedia application development accessible to a wider audience of users than ever before. And multimedia itself is so captivating that many users see an immediate title that they would like to develop.

Although the potential developer may have access to the necessary hardware and software, there still exists a lack of inside knowledge about the unexpected pitfalls (and solutions) that the developer will encounter. This book is meant to fill that gap. Nearly all the titles profiled in this book have received major awards. And the companies that developed these titles have graciously agreed to share their own experiences in developing them—experiences that will help others with their own multimedia development.

Included in this book are interviews with some of the largest players in multimedia title development such as Microsoft, smaller entrepreneurial companies such as Presto Studios and Tom Coffman Multimedia, and educational development centers such as Friends of Fermilab. Each provides a unique experience and background, interesting anecdotes, and valuable advice to the potential multimedia developer.

It should be particularly heartening to the small developer to read the attempts of other small companies to develop multimedia products that were able to win major awards in competition against some of the largest software companies in the world. After all, multimedia is a new game in the computer industry—in many ways its production and “content” have more in parallel to the publishing industry than to traditional computer technology.

Perhaps most interesting is the unusual mixture of people involved in developing multimedia titles. Most have come to the technology from other careers: graphic arts, science, film production, and personnel training. They embraced multimedia as a way to augment and amplify what they had been trying to communicate to others. A graphic artist saw multimedia as a way to tell interactive stories to children and found immediate gratification from creating and viewing an animated sequence in a matter of hours instead of months. A science teacher became involved in multimedia when she saw how much easier it is to convey scientific principles to students using video and sound. Many others have similar stories to tell. I was particularly impressed by the candor (and sometimes humor) the various people relayed and learned a great deal that will help me in my own multimedia projects.

Because of the varied backgrounds of the people I spoke with, our interviews involved a much richer perspective of multimedia application development than stories that are purely technical or from a strictly computer

programmer's viewpoint. As a result, this book will be of interest to a much wider audience and equally useful to those starting out in multimedia title development and those who already have experience.

Introduction to Profiles

The pages that follow provide a fascinating look into the development of multimedia titles in virtually every arena from education and training to entertainment and book adaptation. Each chapter includes a profile of two (or, in the case of education, three) multimedia titles. My goal when seeking the titles to include in each chapter was twofold. My first concern was that every title had been recognized as an example of an excellent multimedia product in terms of content, design, and interactivity; and all the titles profiled here have won major awards in very stiff competition.

My other objective for each chapter was to include titles that would provide different viewpoints in terms of the development process. This involved aspects such as content, the target audience, and the size of the company that developed it. For example, the chapter on education profiles three titles that were developed under very different circumstances and from very different perspectives. One title was developed by a not-for-profit organization for middle school children, another title targets the adult learner and was developed by a small for-profit firm, and the third illustrates an edutainment title developed by the largest software company in the world. Each one of these profiles shows a distinct approach to creating a multimedia application, such as acquiring content, managing a project team, and targeting (and marketing to) a particular audience.

Every person I spoke with offered guidelines (and sometimes warnings) to those who are interested in developing a similar type of application and most of them also shared humorous anecdotes that occurred during development. Several of them expressed opposing viewpoints, such as the size of the team required to produce a multimedia application, but these differing perspectives are valuable in illustrating the various approaches used by different persons and organizations.

Finally, I would like to point out that it was not easy for me to decide which title to include in which chapter. Many of the titles lend themselves to being

used in different areas, particularly education. For example, A.D.A.M. Software, although certainly a training program, could just as easily have been profiled as an educational title. The Living Books are included here with other book adaptations, but are very educational and have won awards in this category. And Encarta is certainly educational, although it is included here as a reference title. It is because of this that I encourage the reader to explore all the profiles in this book. Every one of them provides guidelines and information useful to the developer of any type of interactive multimedia title.

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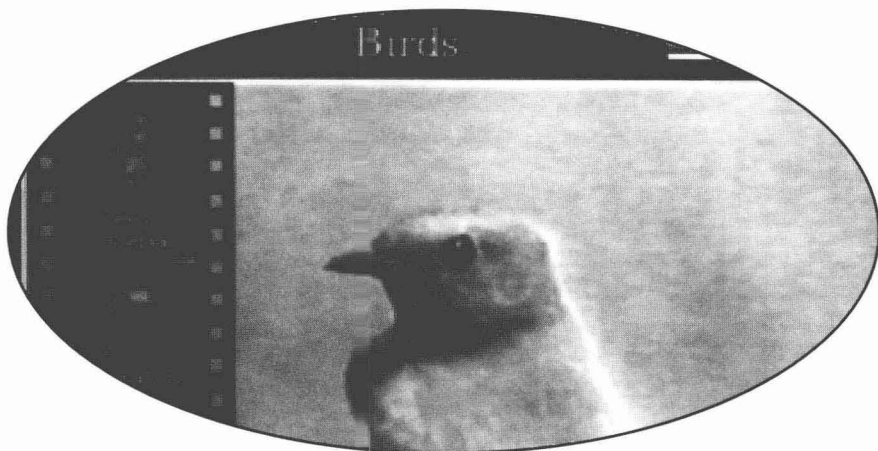
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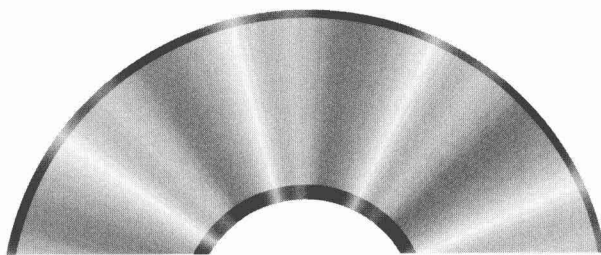
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INTRODUCTION





What Is Multimedia?

The word *multimedia* has been used by different industries to mean different things. Technically, the term refers to the use of more than one medium to convey information. This could mean using two slide projectors at one time (as was common years ago) or combining a narrative with a video to enhance a presentation. Music videos on MTV are a good example of “multimedia” in the music industry—video is used to provide visual impact to a soundtrack. There is no doubt that combining several means of communicating is much more effective, and the more media that are used, the greater the impact and amount of information that can be presented. Although we may enjoy listening to the music of *Swan Lake*, the visual impact of seeing the ballet performed at the same time not only enriches our enjoyment of the music, but it also allows us to better understand the story behind the music, especially if we are also able to read a program that explains the story.

In the computer industry, we tend to use the phrase *desktop multimedia* or *digital multimedia* to distinguish it from other meanings. However, even within the computer world, this may mean anything from the use of text and graphics to the additional use of sound, animation, and video (both digital and analog). More recently, multimedia (specifically *interactive multimedia*) has come to imply all of these elements combined in an interactive program so that the user has control over the information provided.

What Is Multimedia's Great Appeal?

The rapid growth of the multimedia industry is staggering. The market for consumer CD-ROM titles was \$325 million in 1993 and is expected to grow to a \$1 billion market by the end of 1996. Some recently opened software stores