

A Road Map To Multimedia

Introduction

Welcome to the fascinating world of interactive multimedia!

It is often said that we are in the information age. We are surrounded and constantly bombarded by information related technology. It is also often mentioned that technology will change the world. However, historians can testify that it is not technology who changes the world is the people that adopt and utilize technology who makes those changes. To effectively accomplish the change process timely and quality communication of information is needed. By definition effective communication is a two way process. Communication is an interactive process. In this age of information the role of multimedia is to become a tool to be use by communicators of all kinds to communicate effectively catalyzing the change process.

This book, which we prefer to refer to as an instructional packet, was planned and developed to help a new generation of computer assisted communicators to utilized multimedia as an interactive communication tool. The underlying philosophy behind the development of this instructional packet is the understanding that multimedia technology means different things for different people. It might be a communication tool for some, an artistic medium for others, a teaching and learning tool or a way to secure a business transaction. multimedia technology is a tool not an end by itself. Because of this, multimedia technology is a tool applications are limitless and students from a wide variety of fields are encourage to learn how to plan and develop multimedia applications in their fields of interest.

From the author's perspective, the structure and composition of this instructional packet is the result of many years of experience in communicating ideas, concepts, plans, facts, etc. Due to the recent development introduction and evolution of multimedia technology, the authors are members of a generation that learned this technology as it developed. In the beginning of our ordeal in the use of computers as a communication tool we worked individually not with teams of experts in the use of different technologies. In a number of occasions not only we were in the leading edge in the incorporation of the technology into our productions but we were in the bleeding edge taking mayor risks pushing the available technology to its limits. It is at this juncture that we believed that it is time to create curricular materials to develop a new generation of multimedia assisted communicators or what we prefer to refer as multimedia architects. These "architects" will be the leaders and members of a multimedia production team. This instructional packet presents all facets involved in the planning, development, distribution, and delivery of these applications.

How to Use this Book

A Road Map to Multimedia is an instructional packet intended to provide to the desktop communicator a powerful tool to present ideas, facts, information, products etc. in a highly graphic, interactive and fun way. The instructional packet consists of a hard copy book, the interactive CD-ROM book version, and a CD-ROM containing computer software applications demos which are commonly used for the development of interactive multimedia applications.

The book consists of a series of chapters in which a particular component of interactive multimedia applications planning or development will be discussed. In each chapter the student will be introduced to a new component in the planning, development and playback of a multimedia production.

The book content is also presented using an interactive multimedia format in a CD-ROM. The CD-ROM version of the book presents the same topics as in the hard copy version but making full use of the multimedia technology. Structure and content of the CD-ROM will be discussed in the next section.

A Road Map to Multimedia teaches you the basics of interactive multimedia technology. In each of the chapters you will find useful tips for planning and developing and interactive multimedia application.

These tips reflect the author's extensive experience in the planning, development and presentation experience. The tips are meant to pass the author's experience to a new generation of multimedia communicators. By providing these tips, the author expects to help you avoid some pitfalls and as a result to help you in the development of a successful and effective multimedia application.

Prerequisites

As prerequisite to initiating the use of multimedia technology as an individual you should have a working knowledge of your computer operating conventions. If you need to review these techniques, see the documentation that comes with your computer. You should be able to use a mouse, the copy and paste commands. It will be helpful if you have some working knowledge on word-processing and a basic understanding on how to use a paint and draw program. No computer programming experience is necessary for the authoring level to be presented in this book.

In terms of hardware and software requirements you or your educational institution must be able to secure and make available the following minimum hardware configuration and licensed software.

Hardware

Platform	Description
® Apple Macintosh Computers:	12 MB of RAM, math co-processor, processor speed 66 MHz., 2x CD-ROM player, microphone,
® IBM's or IBM compatibles:	12 MB of RAM, math co-processor, processor speed 66 MHz., 2x CD-ROM player, sound board, microphone.

Software:

	Vendor	Platform	Software Name
®	Macromedia	Mac & Windows	Director 4.0
®	Macromedia	Mac & Windows	Authorware Professional
®	Macromedia	Mac	Sound Edit 16 or Sound Edit Pro
®	Adobe	Mac & Windows	Premier
®	Adobe	Mac & Windows	Photoshop

Road Map to Multimedia CD-ROM's

As mentioned above, this instructional packet contains a CD-ROM. The content of the CD-ROM is as follows:

- ® Road Map to Multimedia CD: This is the interactive version of the book. The specific content of this CD is presented in the next section.
- ® MacroMedia Showcase: This CD-ROM contains save disabled versions of MacroMedia's programs frequently utilized in the development of multimedia applications including multimedia authoring programs such as the one featured in this book MacroMedia Director 4.0.

The objective of including the software demos is to provide to the multimedia student an opportunity to sample some of the industry most utilized software.

Road Map to Multimedia CD-ROM Content

The Road Map to Multimedia CD-ROM has been designed to run on both Macintosh and Windows platforms. To run the programs it will be required 8 MB of RAM, system 7.0 or higher in the Macintosh platform or Windows 3.1 in the IBM or IBM compatible computers. The CD-ROM was developed for the double speed CD-ROM drive which is the most wide spread drive in the market.

The CD-ROM includes the interactive version of the Road Map to Multimedia CD, a collection of resources to be use in the development of a multimedia presentation such as MacroMedia Director scripts, scanned images, 3D graphics, animations, and sound files.

A highly intuitive user friendly application interface was developed for the Road Map to Multimedia CD Director movie. Icon design and navigation tools are constant throughout the application. Most objects on the screen are "clickable" requiring from the user minimum or no computer operation knowledge or experience.

Navigational Tools

Road Map to Multimedia CD features full Interactivity. “Tools” available to the program user to navigate through the content in a thematic fashion (Sound, Authoring, Images Text, Music, etc.). A word search tool (glossary) is available at any point in the program through the use of hypertext. The word search tool allows the user to find key words (hot words) such as “Interface” anywhere in the program. The glossary screen indicates if there are graphic, video or audio files available about the subject, word or concept. Content is presented using the multimedia capabilities of the medium such as animated graphics, digitized video, sounds and hypertext to illustrate the development of a multimedia program.

CD-ROM Installation

In order to use in your computer the Road Map to Multimedia CD, the user must copy the fonts included in the fonts folder or directory into the operating system of your machine. It is suggested to consult your network manager or laboratory manager before performing this procedure.

Learning Multimedia by Doing Multimedia

It is our experience that multimedia is learned by actively engaging in the production of a multimedia presentation project rather than just reading manuals of separate and often unrelated pieces of software’s. Due to the nature of multimedia technology, the multimedia architect must be able to understand the features, capabilities and limitations of the hardware and software in order to effectively incorporate them into a multimedia application.

As previously mentioned, quality multimedia production and delivery is the concerted effort of a team. This team concept will be further explored in Chapter 2. But at the introductory level, we intend to provide to the multimedia student a holistic view of the planning, production and delivery of a multimedia application.

Throughout the book a number of exercises will be presented to the student. These exercises are conducive to the production of a multimedia presentation at the end of the book. As a student you will have the flexibility of developing your own topic and type of presentation. But you must follow the steps as indicated to ensure a high quality product at the end of the process.

Learning Multimedia by Surfing the Internet

The rich and chaotic cyberspace of the Internet is becoming an extremely important source of information, resources and knowledge. This availability of information is also true for students, developers and enthusiast of multimedia. In several sections of the book you will be refereed to seek for information available through the Internet. The development of Internet surfing and research skills its becoming critical for all professionals, the multimedia professional is not an exemption.

Organization of the Book

This book was developed with the intention of “virtually” taking the multimedia student by the hand through the process of understanding the capabilities and limitations of the multimedia technology, the planning process, the multimedia “building blocks”, understand the authoring process, and the distribution and playback of the application. The book as well as the CD version is organized in four parts:

Part 1. Multimedia Essentials

Part II Multimedia Presentation Building Blocks

Part III. Multimedia Interactive Authoring Basics

Part IV. Packaging, Distributing and Presenting Your Multimedia Program

Part I. deals with multimedia basic concepts such as the definition of multimedia, different multimedia applications, communicating with multimedia, the multimedia development team, and the multimedia presentation planning process.

In Part II we will explore the basic steps to develop the multimedia presentation building blocks such as text elements, graphics, sound, digitized video, computer animation, etc. The selected strategy to accomplish this goal will be to introduce the basic use of some software applications that will provide the user with the capability to scan images, paint, draw 2D and 3D graphics, edit and manipulate images and audio, capture digitized video and other techniques.

Once you have a basic understanding of the fundamentals for the development of the multimedia building blocks, the book will take you through the next step, the authoring process (Part III). The authoring process consists of bringing together the above mentioned elements into a comprehensive presentation and the incorporation of interactive elements.

In Part IV you have developed a already a multimedia presentation, but you need to determine the best possible way to package it, distribute and present your application. This part will provide you with specific information into how to configure the required hardware to display your presentation.