

Authoring a Macintosh CD-ROM

A Short Course for People Who Don't Read Manuals

by
Herbert A. Goodrich

Authoring a CD-ROM that can be read by a Macintosh® computer is a relatively simple process if you follow a few basic rules. The following short course is designed to cover the basic do's and don'ts as you create your first CD-ROM.

What You See Is What You Get

Macintosh computers read HFS (Hierarchical File System) formatted discs. A hard disk drive is normally the content source for the audio-CD or CD-ROM. The mastering software simply copies all the information on the hard drive to a tape or a blank CD (frequently called a "one-off"). Therefore, anything on the hard drive becomes part of the CD. This includes trash in the trash can, fragmented files, applications, etc. and everything will be viewed exactly as it appeared on the hard disk—open windows, icons, and all. So the first rule is the most important one:

- Always be sure that the master disk drive looks exactly the way you wish your CD-ROM to look before the master "one-off" or tape is made.

Preparing The Content

Regardless of the authoring software application you choose, these issues must be determined before you begin:

- What is the target computer system configuration for playback of the CD?

Items to consider should include:

- Computer operating system version
- Minimum amount of RAM
- Size of the target monitor or display
- Applications that may be required to view the data
- Access speed of the CD-ROM player
- External speakers (normally required when CD-quality audio is accessed from tracks other than the data track (track 1))

- Have legal rights to all the materials and applications to be included on the CD been obtained? Will licenses be required?

Preparing Your Master Hard Drive

Once the content has been prepared to your satisfaction and tested on the hard drive, it is time to press a one-off. Playing the material back from a CD player is normally slower than retrieving data from the hard disk drive, so steps must be taken to insure optimum performance. Preparing the hard drive for mastering is one of those steps.

- Set a partition size that will hold the entire contents of your CD and the formatting coding.

- Format the drive or defragment the drive using an application such as Silverlining™ from La Cie, Ltd. or Speed Disk™ from Symantec, Inc.
- Remove the boot blocks using a program such as fEdit plus™ by John Mitchell. If you are writing a one-off using a desktop mastering system, some mastering applications will automatically remove the boot blocks during the mastering process.
- Copy your data onto the newly prepared hard drive if you have used the formatting solution. Be sure to double check the number of files to confirm that all have been copied.

After pressing, it is important that the content of this new CD be tested since many applications will behave differently when used from CD-ROM.

Giving the CD a Professional Look

It was pointed out earlier that what you see is what you get. Give your CD a professional look by following these suggestions:

- Place the opening window in the upper left corner of the screen. This way it can be seen regardless of the monitor size on which it is displayed.
- View by icon whenever possible.
- Use color labels for folders to help organize and add life. CDs are meant to be fun!
- Open every folder and make the windows a uniform size.
- Layer the windows so that all window titles within a given folder can be seen.
- Align the windows with each other.
- Close all windows before mastering the one-off.

Mastering a CD-ROM on the Desktop

CD-ROM mastering units for the desktop are becoming more affordable all the time (\$4,000.00 - \$6,000.00). They are connected to the computer through the SCSI chain and a variety of software packages are available to operate them. If you do more than a dozen CD-ROM one-offs in a year, one of these machines may be just the peripheral you need. The one-off disc can be sent to a manufacturing facility for replication. One-off CDs are durable and easy to ship. They save wear and tear on a hard disk drive which inevitably occurs when a drive is shipped back and forth to a pressing facility. Service bureaus which can create one-offs for you are also available in most major cities.

Test Before You Press

Undoubtedly, the most important step in completing a CD is testing, and sadly enough, it is one of the areas more frequently overlooked. As deadlines and schedules compress, the testing cycle becomes shorter and shorter. Unfortunately, many CDs have failed or have been recalled because adequate testing was not done and bugs were found after replication was over.

Test your CD. Open every window, press every button, watch every demonstration and presentation from beginning to end on a system configured exactly like your target platform. Take the time to do it right. In the long run, rigorous testing will save you time and money.

Now That the CD-ROM is Done...

Replication is a quick and relatively inexpensive process in the United States. Some of the larger replication houses include Digital Audio Disc Corporation (DADC), Disc Manufacturing, Inc. (DMI) and 3M Corporation. Here are things to remember:

- Cost is based on quantity and the time it takes to make the CD. If you want it in two days, it will cost more than if you wanted it back in seven days.
- All manufacturers charge a mirroring fee to create a glass master from your one-off or tape.
- CD-label artwork needs to be into the factory two days prior to replication. Specifications for label artwork can be exacting, but representatives at any replication house will be ready to assist you in your preparations.
- Packaging is not included in the replication price. Replication houses do offer a variety of options — from paper sleeve to jewel case — but CDs can also be shipped to another location for specialty packaging.
- The average cost to ship a CD is \$0.34 (within the continental United States).

There are no secrets

Creating a CD-ROM or an audio-CD is done in the same way. There are no secrets, and the cost of producing CDs is dropping every day. Many service bureau personnel and manufacturing representatives stand ready to assist you. In addition, a number of firms specialize in helping producers of content prepare their materials for CD-ROM. For further information regarding these services, call 1-800-236-3623 weekdays between 9:00 am and 6:00 pm PST.

Herbert A. Goodrich is the CEO of FeatherOut, Inc. and President of Creative Media. A developer and consultant to firms creating CD-ROM-based multimedia marketing tools, presentations, kiosks and archives, Dr. Goodrich is a former educator and is listed in International Who's Who in Education. He is also a musical conductor, composer, and arranger. He has published over 50 CD-ROM titles in eight languages, primarily for the Macintosh platform.

Herbert A. Goodrich
President, Creative Media
32 Chicory Lane
San Carlos, CA 94070

415-508-9709

***** NOT FOR DISTRIBUTION *****

© Apple Computer, Inc.

Please note that the AMP Survival Guides are the property of the Apple Multimedia Program and are for members only. These documents may not be redistributed or posted to other BBS services