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Selecting Multimedia Software

by Norman Desmarais (Providence College)

A few years ago, it cost about \$5,000 for a 386 computer that could almost do multimedia. Even then, the computer lacked a few fundamentals such as sound or a CD-ROM drive. It took another couple thousand dollars for the extra features and the software. Today, we can buy a 486 with all the trimmings for less than half of the cost a few years ago.

The hardware should be able to handle the software and should, therefore, be the first consideration in selecting a multimedia title. The Multimedia Personal Computer (MPC) level 1 specifies:

- 386-based PC or better.
- 4MB RAM.
- 30MB hard drive.
- CD-ROM drive capable of transferring data at a sustained rate of 150 kilobytes per second.
- Eight-bit wave audio (digitized sound) and MIDI (music synthesizer) playback.
- Microsoft Windows 3.1.

This is only a minimum. Many multimedia titles use a lot of audio, graphics, photos, and full-color video that require greater hardware performance to play properly, i.e. without unnecessary breaks in the audio, lips out of sync with the soundtrack, or jumpy video. Consequently, a second level of the specification (MPC level 2) calls for a higher level of hardware for better performance:

- 486-based PC or better.
- 8 MB RAM.
- 100 MB hard drive.
- CD-ROM drive capable of transferring data at a sustained rate of 300 kilobytes per second.

The software box and documentation and product descriptions usually indicate the recommended system requirements.

As with hardware, the price of software has also dropped dramatically with the enthusiastic interest of the consumer market in multimedia. The education and entertainment markets account for a good portion of the explosive growth in multi-

media software. We frequently hear and read terms like "infotainment" and "edutainment." But what should we look for in a good multimedia program?

First, we need to consider the audience for the software. We must look not only at what we teach but also how we teach it. Is the software appropriate to its intended audience? Are the users computer literate? If targeted at children, is the interface and the navigation system appropriate to this group? How large is the audience and has the developer geared the presentation to them? Is it easy to set up, install, and maintain (even by those who know nothing about computers)?

Once into the product, how easily can one navigate? How easy is it to locate desired information? Multimedia software offers a high level of interactivity between the user and the content. But in many instances, users can find themselves lost with no way to escape or of finding the information they're after. Is the interface intuitive enough that one can easily move from one section to another, locating the video versus the still pictures, the magazine articles versus the animation? If it takes more than five minutes to figure out how to use the software, then it's probably more difficult than it needs to be.

Does the product have flexible built-in learning strategies that let users "explore," "discover," receive hints instead of answers? Does it use text as a reference tool or as the main source of instruction?

Is the content of the highest quality and greatest scope? The information content must be accurate, complete, and appropriate to the product's objectives. Is it comprehensive in both depth and breadth or is it simply a mile wide but less than an inch deep? Does it have a brand name or a reputable editor that might establish its credibility? Does it include cultural diversity possibilities with language translations, cultural events, history, etc? Very few products do so.

What about the quality of the animation, sound, and video? Are the multimedia elements suitable in quality to the nature of the product and are they cre-

atively integrated into the software? A lot of multimedia titles are little more than electronic scrapbooks of bit-mapped photos, basic animation, some sound bytes, and glitzy packaging. Many multimedia products are just compilations of existing software that show little or no understanding of the new medium that they have been transferred to — many people refer to this as "shovelware."

What about aesthetic elements? Are the icons animated and colorful? Are they intuitive in terms of quickly conveying their purpose? Is the video interesting and relevant to the title? Does the user experience the information in a single medium or in multimedia form? This resembles the contrast between silent black and white films and color movies with sound, animation, and special effects.

How engaging is the software? Does it keep the user coming back for more, like a good book? Does it have the depth and visual appeal to compel the user to want to interact with and experience it on an ongoing basis? Does it attract people to crowd around the computer or do users quickly get bored?

If the product is to be used in a classroom setting, can teachers and students easily create and revise accompanying materials? Does the product include a built-in evaluation module that gives advice on how students will most likely perform on a standardized test, what grade they currently have, and how they might improve their performance on the next try? Does it let students progress at their own rate and follow their own interests? Does it encourage teams of teachers and students to work together?

Finally, can it be networked? In an educational setting, networking may become an important factor. Most products do not support networking at present. While networking multimedia is technically feasible, it places severe demands on a network and may result in poor playback (as with improper hardware) or in system crashes if not implemented properly. Then, there are the issues about licensing, etc. But these are matters for another discussion. ☞