

# Macintosh vs Windows 95

## #9 Speech

### Summary

The Apple® Macintosh® computer is far ahead of PCs running Windows 95 in its ability to generate and recognize speech. Every Macintosh computer sold in the U.S. today has the ability to speak; PowerPC™-based Macintosh models equipped with Apple's speech recognition software can also respond to spoken commands. PC speech does less, costs more, requires dedicated hardware support, and is poorly integrated with the overall computer system. Speech is one of the ways in which Macintosh multimedia is moving far ahead of the Windows PC platform.

This is part of a series of short reports on the contrasts between a Macintosh computer and a PC with Windows 95. To see previous entries in the series, visit us on the Internet at <http://www.apple.com/whymac/>

### The Macintosh Advantage

Speech synthesis, also known as text-to-speech, can run on all Macintosh systems shipping today and is used in education and entertainment applications. Speech recognition runs on PowerPC-based Macintosh models and is bundled on the new Power Macintosh® 7500 and 8500 models (the software will also be available for downloading on the Internet, eWorld,™ AppleLink,® and on the latest Mac™ OS CD, version 7.5.2). With speech recognition you can use spoken commands to execute common desktop tasks like opening files and folders, starting applications, switching applications, and closing windows.

On the PC, by contrast, speech does much less. The Microsoft Sound System, for instance, requires a hardware add-in board and can't truly speak text; it can only play back recorded voice clips, something the Macintosh has been able to do, with no add-in card, for 10 years. Speech recognition with the Microsoft Sound System also requires add-in hardware and must be trained repeatedly before you can use it. Macintosh speech recognition requires no training.

### Speech recognition

Macintosh speech recognition includes a productivity utility called Speakable Items. Any icon can be made "speakable" by placing its alias in the Speakable Items folder; speaking its name is then like a double click; it opens or launches the spoken item. The item itself can reside anywhere on a hard drive or server, buried in the hierarchy of folders. For example, a user wanting to check her stock portfolio without opening four folders and launching an application, would just say "check stocks," and the Macintosh would do the rest.

Speakable items can also be AppleScript™ files, meaning users can execute an almost unlimited series of actions by speaking a single command. Example scripts are provided with the software.

Apple's speech software can recognize virtually any English-speaking voice, even those with an accent. Misfires, a common speech recognition problem, have been virtually eliminated. (Misfires happen when a computer mistakes some other sound for a command; to combat this, Apple's software allows the user to specify a name for the computer that must be spoken before a command, or to cut off all speech recognition unless a specific key is pressed on the keyboard.)

### Speech Synthesis

Apple's speech synthesis software comes with 22 user-selectable voices, ranging from serious business versions to fun voices like a talking robot and a person speaking underwater. The voices also let users select whether they want higher speech quality or a smaller memory footprint. Game developers, educational software developers, and CD-ROM developers can have any amount of text read aloud from their applications using Apple's text-to-speech.

Apple is now also providing text-to-speech for Mexican-style Spanish, which can speak Spanish aloud with a Latin American accent.



## What It Means For Users

Speech makes it easier and more natural to work with your computer. In the home and in schools, the computer can talk to young users, meaning they don't need to know how to read before they can use the computer to learn. In business, ClarisWorks can read your document back to you, an easy and comfortable way to proofread your work. Executing common desktop tasks with "hands-free" speech commands is fast and easy and allows you to keep your mind focused on getting things done.

An example of the synthesis advantage is Scholastic's WiggleWorks for the Macintosh, a consumer education title which reads stories to children while the text and images are up on the screen, and allows the children to add their own text, which the program will also read aloud.

## What About the Future?

Apple's competitors sometimes use speech in demos, ads, and futuristic videos, but Apple is already on its third generation of those features and moving further ahead. Soon speech will recognize more and more phrases. Totally hands-free computer use—over the phone, by young children, by workers who are simultaneously doing other things—will be commonplace. Apple is also working to add other languages, including Chinese, French, Italian, and Japanese.

Apple's text-to-speech technologies can be easily incorporated into third-party applications. In most cases this can be done with just a few lines of code. They will also be able to add speech recognition with the release of new application programming interfaces planned for Fall 1995.

## Questions or Comments?

You can send e-mail to the Macintosh Platform Marketing team at [competition@applelink.apple.com](mailto:competition@applelink.apple.com)