# Will NT Take Over the Desktop?

WITH Windows NT nearing full release, many of you who have been watching quietly from the sidelines are beginning to speak up. The questions I keep hearing are: Is NT going to take over the desktop? For whom is NT designed?

Let's put NT into a larger perspective. We need to separate the application programming interface it offers from the particular implementation called Windows NT, which also includes features such as portability to other architectures and security.

The API—the so-called Win32 programming interface—is where we need to focus. Microsoft is building a continuum of ever more powerful systems all united by Win32 or its variants. At the low end, Windows 3.1 will be brought into the fold by way of the Win32s subset.

Win32s is a package of DLLs that allows 32-bit applications to run on a 16-bit system. Only some of the Win32 functions are provided—there are still no
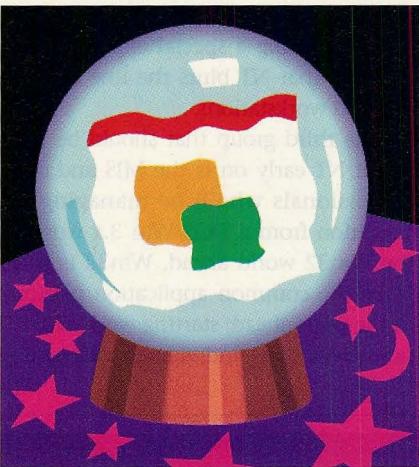
threads, pipes, consoles (text windows), semaphores or true multitasking—but at least the functions that are there work more or less the same as under NT; those that aren't can still be called.

So it's possible—in fact, Microsoft claims this is precisely its strategy for its own applications—to build products for NT that "gracefully degrade" under Windows 3.1. For example, if an application found it could not use threads, it might choose to serialize activities that would have been overlapped on NT. The application would still work—just not as well.

A second and more interesting subset incarnation of Win32 is Chicago, or Win32c. As we went to press, details on it were still skimpy. But the basic idea seems to be to provide all the functionality of Win32, including support for threads and pipes and so on; it may, however, lack the more esoteric security and registry functions or the portability to other processors that NT provides.

Although I have no way of knowing if this is Microsoft's intent, it would be sensible to couple Win32c tightly to DOS 7.0 and Windows 4.0 (in 1994). Bill Gates has said that DOS 7.0 will be the biggest change ever in DOS. I expect that DOS 7.0 will support the nongraphical calls in Win32c and that Windows 4.0 will support the whole thing.

If I'm correct, then Win32s might be reasonably viewed as a stopgap. Once Win32c arrives, Win32s could be repositioned as a low-end offering: for small portable units, for example. Many desktop machines now in use and certainly all newly purchased machines in commercial settings would be capable of running Win32c. That holds true even if they don't have the hardware resources to run NT.

If Win32c is positioned correctly as the rightful heir to the DOS throne, with good introductory pricing and full backward compatibility, a tremendous initial user response seems plausible. Given the possibility of building more useful, more responsive applications, a shift to that interface by software vendors also seems plausible. As more users begin running Win32c, more vendors might produce applications exploiting it, causing more users to shift to it, and so on.

Yes, but who is it for?

There are three groups for whom NT is designed, at least in the short run.

First are those who understand and need this level of capability: software developers, folks building networks around big servers, or government agencies that require security features.

If you work with a lot of Windows or DOS applications, and you're uncertain about OS/2 but are looking for an advanced system with that level of capabili-

ty, NT is the only other game in town. And with support for multiprocessors from NCR or Sequent and RISC machines from DEC and Mips, NT offers a significant advantage to the person who needs a big server.

The second group is made up of the UNIX expatriates: companies that in the past would never have considered working on a PC. When DEC has to decide not to run the Alpha chip in its NT machine at the full 200MHz it's capable of doing, just to avoid having it classed by the federal government as a supercomputer requiring a special export license, it's clear that NT blurs the line between PCs and workstations.

The third group that should be looking at NT early on is the MIS and other professionals who'll be managing the transition from a DOS/Win 3.x world to the Win32 world ahead. Win32 is going to be the common application platform in the years ahead; starting work with NT now gives these individuals a chance to

get ahead of their end users and gain experience with this new technology.

Asking how successful NT will be or who it's designed for may be asking the wrong question. To the extent that NT is merely the first and most full-blown implementation of Win32, the better question is: What role will Win32 play? Even if NT is, as some argue, destined to be only a high-end workstation or server operating system, I think its programming interface will quickly become dominant on desktops by virtue of Win32s and, especially, Win32c.

I expect NT to be wildly successful; even more successful will be the application standards it sets. ■

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