NT

OS/2 of the Future?

By Douglas A. Hamilton

Microsoft's NT or New Technology could be a better OS/2 than OS/2, but what do we really know about NT?

First, at the risk of belaboring the obvious, a confession: I really don't know what I'm talking about.

It's not that I wouldn't like to, mind you, but all I know about NT, or New Technology, as Microsoft's successor to Windows is called, is what I read in the press. The actual specs, much less a copy of the software, don't seem to be too readily available.

I'm reminded of the old adage that new software always looks best just before you find out what it really is.

There are, of course, some good reasons to be very optimistic about NT. The key architects seem to bring excellent credentials. And the microkernel approach they've borrowed from the MACH project is clearly a strong point. The idea is to build only a very tiny, trusted kernel of an operating system and then layer all the other services — file system, networking, etc. — outside the kernel.

Security, as measured by all those mysterious tests applied by intelligence agencies, will undoubtedly be superior. There will also likely be better modularity and greater extensibility since, by design, not everything will have to be thrown right into the kernel just to get at kernel services.

We might want to consider the advice given by Frederick Brooks in *The Mythical Man-Month:* plan to throw one away. This is a second attempt for Microsoft. They already threw one (i.e., OS/2) away and hopefully have learned something from the experience.

The membership of the NT-support ACE consortium, a group pushing for a standard for RISC-based workstations based on the MIPS chipsets, is also very encouraging for what it says about NT, presuming, of course, that they know more about what it is than we do. I'm particularly struck by the participation of Silicon Graphics.

There are a lot of very brilliant and talented graphics systems designers in the industry, but let me be blunt: nobody, but nobody understands 3-D graphics as well as the folks at Silicon Graphics. There are a lot of companies that can throw out claims of so many hundred thousand Gouraud-shaded triangles per second but as in everything else, there's a difference between having fast hardware and making it do something useful.

The key technology Silicon Graphics offers is an object-oriented way of easily describing things in 3-D space, and then simply letting the hardware do the right thing to display it from the correct angle with proper perspective, etc. There's something downright magical about writing a program not much more complex than "Hello, world" and seeing a realistic 3-D object appear on the screen, apparently suspended in mid-air, tumbling as quickly you move the mouse.

Windows and PM are fundamentally 2-D graphics systems. That's better than no graphics at all, but as we look ahead to multimedia, virtual reality and other advanced graphical applications, it's clear these programming interfaces will never suffice. The participation of Silicon Graphics suggests NT may be much more capable.

Teaming with MIPS is also a strong point. As performance is pushed higher and higher, RISC (reduced instruction set computing) has to be a factor. But RISC is more than just fast hardware running a simple instruction set. To make it work requires first-class compiler technology and that's where MIPS stands out, making them a very wise choice.

But there are also some exposures. First among them has to be the question of Microsoft itself as a partner or supplier. Constantly changing strategies hurts their credibility. The break — and now open warfare — with IBM has damaged their ability to influence. If IBM can't force them to stick to a plan, who can? This has to make the job of selling NT more difficult.

Second is the question of timing. If IBM can establish OS/2 2.0 before NT is real, they've won, unless Microsoft is willing to re-enter the fold and return to their old story that NT is really OS/2 3.0 and that PM will be fully supported. The scuttlebutt I hear is that early beta copies

of NT are only now beginning to circulate and there still aren't more than a handful of sites anywhere in the world that have it. By contrast, IBM should have probably formally announced 2.0 by the time you read this and it seems a safe bet it'll be shipping long before NT. By the "Rule of 3" — that no Microsoft product ever really works until release 3 — IBM's lead with 2.0 looks pretty ominous.

Speculation for some time has been that Microsoft really didn't intend (regardless of their public posture) to support PM on NT. The infamous Gates memorandum was really just the first public confirmation of this. Microsoft was apparently betting that by the time they were proposing to ship PM on NT, nobody would care about it anymore. Imagine their surprise and horror this spring, when IBM began to make it look like 2.0 might actually succeed!

There are other risks as well. Microsoft has described NT as a natural 32-bit extension of the Windows API. But from the sound of it, all the features of OS/2 have been tossed in. It seems fair to ask how easily current Windows applications vendors are going to be able to port to NT.

Microsoft's strategy for their own applications — just #IFDEF'ing the source code to compile in or compile out the use of things like threads — does not sound all that convincing. In my experience, you don't just sprinkle a few threads on an application and make it better. You have to really weave them into the basic fabric of your application to do any good.

For years, Bill Gates has proclaimed that key development enabling the growth of the PC industry and of shrink-wrapped software was binary compatibility — a single platform based on the Intel architecture. That also is falling by the wayside, though Microsoft's new C 7.0 compiler and its ability to generate p-code may portend a way to create a single binary that runs on both Intel and MIPS processors.

It's still possible that NT will be an immense success. I really don't know how to call this one, but at this point, I'd call it a long shot.

TCP/2™

TCP/IP Networking for DOS & OS/2®

- *Support for Ethernet™ Token Ring, and SLIP through NDIS, ODI, CM*
- *Network accessibility from protected and real modes*
- *Full server operation for ftp, tftp, telnet, rsh, rexec, talk bootp and SMTP/sendmail*
- *TCP/2-DOS can be accessed from Windows™ 3.0*
- *IP gateway capability with routed*
- *Remote tape access*
- *TCP/2-DOS supports VT102® emulation for remote login*
- *Kerberos clients and server available*
- *Developers Kit with socket library*

TCP/2 Supports: NETBIOS, NFS® access, SNMP Tools and Domain Name Server

- *A DOS version that loads above 1MB is available*

TCP/2 is the Choice of Software Developers.

A Dan Lanciani Product

TCP/2™

TCP/2.....$475
Dev. Kit.....$750
DOS Version.....$375

OEM inquiries invited.

For further information contact:

Essex Systems, Inc.
One Essex Green Drive
Peabody, MA 01960
(508) 532-5511
(508) 531-5541 (fax)

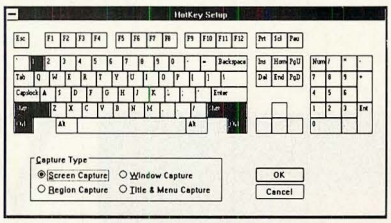
TCP/2™ is a trademark of DLD Consulting. Ethernet™ is a trademark of Xerox Corporation. OS/2® is a registered trademark of International Business Machines Corporation. TCP/2 is based in part on work done by the University of California Berkeley. NFS™ is a trademark of Sun Microsystems. All other products are trademarks of their respective owners.

Circle 127 on reader service card

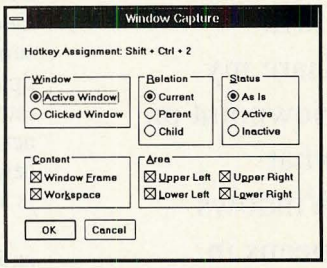
FullShot™ 1.0

The Complete Image Capture Program for Microsoft® Windows™

FullShot 1.0 is designed for any Windows user who needs an effortless, effective way to work with "snapshots" of Windows screens. It's perfect for images you want to include in manuals, interface design, training handouts, presentations, or marketing materials.



- Capture images using hotkey(s) or the FullShot icon
- Choose hotkey(s) interactively using a graphic keyboard display
- Capture a full screen or any part of a screen
- Capture windows in many ways
- Capture black-and-white, 16-color, and 256-color images
- Translate color images to gray patterns or black and white
- Resize and scale images
- Rotate images
- Flip images
- Crop images
- Export to and import from BMP, TIFF, PCX and CLP
- Support all Windows graphics cards and printers
- Print using any of nine page alignments
- Print in color, gray pattern, or black-and-white mode



Only $99.95 plus $4 S & H

To Order Call
1-800-347-0343

INBIT™
INBIT
P.O. Box 391674
Mountain View, CA 94039
Phone: 415-967-1788
Fax: 415-967-8614

INBIT and FullShot are trademarks of INBIT.
Microsoft Windows is a trademark of Microsoft.

Circle 128 on reader service card