an option to display a status bar like XPress and the new PageMaker for Macintosh offer. While Ventura pioneered the use of coordinates for exact placement of frames, it does not let users see these coordinates as they resize or select elements with a mouse. When no one else supported positioning by coordinates, that was no serious omission, but now that Ventura's chief competitors have copied the technique and improved on it, Ventura has fallen behind. We rate ease of use very good.

ERROR HANDLING:

Ventura has the warning features you'd expect when quitting without saving, but it lacks the incremental save feature that PageMaker offers as you turn pages, which helps ensure smoother recovery in case of a system crash.

We had several unrecoverable application errors and did lose some data. However, these seemed to be caused by a style-sheet corruption when we inadvertently tried to open a Ventura 4.0 file in Ventura 3.0. Restoring the former style sheet did away with most of the UAEs.

A welcome addition is an undo function. We rate error handling satisfactory.

SUPPORT:

Support policies: Ventura Software offers

> **Ventura 4.0 is competitively priced, and its rich feature set is certainly worth the cost.**

free technical support via a toll number to registered customers for 90 days after the first support call. Support hours are 6 a.m. to 5 p.m. Monday through Friday Pacific time. In addition, Ventura offers fax and BBS support. Optional support plans offering access to a toll-free number are also available. We rate support policies satisfactory.

Technical support: Ventura's technical support continues to be weak. We received vague, incorrect, or partially correct answers to difficult questions. One technician even tried to talk us through a nonexistent feature (irregular text wrap). We rate technical support poor.

VALUE:

At $795, Ventura is priced competitively, and its rich feature set is certainly worth the cost. But Ventura's pricing for its add-ons is high, particularly for the color separator, since XPress includes that feature and Aldus now bundles its separator product with PageMaker for Macintosh and is expected to do the same for its Windows version. While most users don't print in color, Ventura's pricing difference is considerable for users of color-intensive documents. But for the majority of users who don't use color, Ventura remains a very good value. ☐

Galen Gruman has set up an electronic publishing system for a bimonthly trade magazine and a quarterly Computer Press Association newsletter. He has evaluated MS-DOS and Macintosh desktop publishing and graphics programs for several years.

IBM breaks usual form, ships fastest 386/20

Model 56SLC takes top spot by large margin with boost in performance and CPU speed

BY TIM ZITTLE TEST CENTER
AND KAREN A. BROPHY REVIEWS

IBM should break conventions more often. Big Blue, which has historically avoided the coprocessor market, has developed its new 386SLC chip in cooperation with Intel and Burlington. The chip, which incorporates 8K of integrated cache, boosts the PS/2 Model 56SLC to the top performance position in its class. The chip also holds an optimized instruction set and a floating-point coprocessor.

We tested a beta version of the 386SLC in the PS/2 Model 57SX (October 21, 1991, page 163) and noticed a dramatic improvement in all speed categories. The final result is indisputably the fastest 386/20 we have tested.

In CPU speed, the 56SLC was 42 percent faster than Northgate Slimline 32, the leader in our last product comparison (February 25, 1991, page 53) and only 2 percent slower than the average 486SX/20.

This Model 56SLC outruns any previous IBM we've seen in this class; it is 80 percent faster than the Model 40SX (reviewed October 7, 1991, page 72), the fastest IBM 386SX/20 to date.

In disk-intensive scores, the Model 56SLC was 6 percent faster than the Northgate and 17 percent faster than the average 386/20. The IBM excelled in multitasking scores, surpassing the Northgate by 31 percent and the Model 40SX by 70 percent.

There were no compatibility problems with the PS/2 Model 56SLC.

Expandability for the system is not as beefy as previous models. There are three 32-bit expansion slots. The motherboard comes with 4 megabytes of 70 nanosecond SIMMs and supports a maximum of 16 megabytes of RAM. It houses two external 5¼-inch drive bays but has no internal drive bays. The largest hard drive available is 400 megabytes. After our test configuration, all three 32-bit slots were open and no drive bays were free.

The PS/2 Model 56SLC's setup was smooth as with most IBM machines. The hard and floppy drives slide into drive bays and lock themselves in place; no screws or tools are required. The memory uses SIMMs and is easy to install. However, the expansion cards need to be removed to add extra SIMM panels. Setup can be either ROM or disk-based. The system cannot directly access the ROM-based setup, though, unless something has been changed on your system (i.e., added drive). To access the setup when nothing has changed, you must use a disk.

This is a well-designed system with no

> **In CPU speed, the 56SLC was 42 percent faster than Northgate Slimline, our prior leader.**

patches found on the motherboard. The small footprint provides case lock protection and a swinging door makes accessing the drives simple. There are keyboard and password locks available through software.

Technical support scores are based on a reader survey.

The Model 56SLC, sold through dealer channels, is priced at $4,030 as configured for our tests. The Northgate Slimline 32 is $2,599 direct. With a 25 percent dealer discount, the price of the Model 56SLC is extremely competitive and the excellent performance well worth the slightly higher price.

The PS/2 Model 56SLC now ranks as the superior machine in its class. The new SLC chip sets a challenging precedent in the 386SLC market. The speed of this chip machine rivals the average 486SX; it's a great value for anyone looking for a fast machine without the high price tag.☐

20-MHz 386SLC MCA COMPUTER

IBM PS/2 Model 56SLC

Criterion	(Weighting)	Score
Performance		
Speed CPU-intensive	(150)	Excellent
Speed disk-intensive	(100)	Excellent
Speed multitasking	(125)	Excellent
Compatibility	(150)	Excellent
Expandability	(75)	Satisfactory
Three 32-bit slots, two 5¼-inch drive bays; up to 16 megabytes of RAM.		
Documentation	(50)	Satisfactory
Setup	(75)	Very Good
Easy access to memory modules, coprocessor socket, ROM based.		
Serviceability		
System design	(50)	Very Good
Small footprint; drives removable via swinging door; easy access to SIMMS; no patches found.		
Support policies	(50)	Satisfactory
Technical support	(75)	Good
Score based on reader survey.		
Value	(100)	Very Good
Final score		**8.2**

PRODUCT SUMMARY

Company: IBM Corp., 1133 Westchester Ave., White Plains, NY 10604; (800) IBM-9292.

List price: $4,030 as configured; sold through dealer channels.

Features: 20-MHz zero-wait-state 80386SLC CPU; one each serial, parallel, mouse, SCSI ports; 16-bit VGA built in; MCA bus; 118-watt power supply.

Peripherals: Enhanced keyboard.

Storage and memory: 160-megabyte hard disk with SCSI 1:1 controller; 1.44 megabyte 3½-inch floppy drive; 4 megabytes of 70-nanosecond RAM (16 megabytes maximum).

Pros: Fastest 386/20 tested; system is easy to setup and maintain; well-constructed machine.

Cons: Needs more expandability options.

Summary: The fastest machine in its class offering near 486SX speed at a very reasonable price.

20-MHz 386 Computers
(Times are in minutes:seconds)

Vendor	Speed score times CPU-intensive	Disk-intensive	Multitasking
IBM PS/2 Model 56SLC	23:06	46:55	2:42
Northgate Slimline 32[1]	32:44	49:51	3:32
IBM PS/2 Model 57SX[2]	43:12	1:02:17	4:13
IBM PS/2 Model 40SX[3]	41:29	56:58	4:36
20-MHz 386SX average	36:45	54:55	3:57

[1] Leader in February 25, 1991, product comparison, page 53.
[2] Tested without 386 SLC chip, October 21, 1991, page 163.
[3] IBM PS/2 Model 40SX reviewed October 7, 1991, page 72.