

PC MAGAZINE

www.pcmag.com



SPECIAL REPORT

Amazing Graphics
Breakthroughs
That Will
Revolutionize
Computing

New Benchmark
Tests Find Fast
Windows PCs
Top New Macs
For Web Access

**Speech
Recognition**
Accuracy Up,
Training Time
Down – The Best
Really Do Work



FIRST LOOKS

- Pentium III Notebooks
- FileMaker Pro 5.0
- Apple iBook
- Internet Hard Disks
- Sony Cyber-shot
- AOL 5.0
- LapLink 2000
- MS Works Suite 2000

THE INDEPENDENT GUIDE TO PERSONAL COMPUTING AND THE INTERNET

VOL.18 NO.21 DECEMBER 1, 1999



Testing with
New Internet
And Graphics
Benchmark
Programs

PC Labs Tests 51 of

**DOCKET
ALARM**

Find authenticated court documents without watermarks at docketalarm.com.



34



315



64

ON THE COVER:

- Amazing graphics breakthroughs. [Page 191](#)
- Inside PC Labs. [Page 34](#)
- Web site hosting. [Page 212](#)
- Speech recognition. [Page 167](#)
- New technologies create fast PCs. [Page 100](#)

Cover photography by Thom O'Connor

6 PC MAGAZINE DECEMBER 1, 1999

TRENDS

- The hand-held shopping mall.....32
- Personal Web shopping advisors....33
- iMac overhaul34
- Digital identity cards36
- The multicultural Web.....36

FIRST LOOKS

- Pentium III Notebooks45
- FileMaker Pro 549
- ACT! 2000.....49
- Apple iBook.....53
- 3D Studio MAX R3.....57
- 3D Studio VIZ R3.....57
- DocSpace Drive.....60
- FreeBack.....60
- idrive61
- X:drive61
- Sony Cyber-shot DSC-F505.....64
- Epson Perfection 1200U64
- AOL 5.0.....66
- Microsoft Works Suite 200066
- HP CD-Writer Music.....68
- Easy CD Creator 4 Deluxe68
- LapLink 200073
- Delphi 5 Enterprise73

OPINIONS

- Michael J. Miller4
- Jake Kirchner34
- Bill Machrone81
- John C. Dvorak83
- John C. Dvorak's Inside Track85
- Jim Seymour89
- Bill Howard93

SOLUTIONS

- HARDWARE**240
PC Magazine Labs' new benchmark tests.
- INTERNET**247
Detect and protect your system from Internet intruders.
- OFFICE**257
Collaboration in Office 2000.
- DESKTOP**261
Unpartition your hard disk.
- PC TECH**265
Active Directory Service Interface.
- UTILITIES**270
Slice32 splits large files.

AFTER HOURS

- Photo-sharing Web sites are fun, easy to use, and free315

More online at
www.pcmag.com



Check PC Prices

Use PC Magazine Online's price quote system to get up-to-the-minute prices on all the fast PCs evaluated in this issue's cover story.

New-Product Alerts

Sign up and get Bill Machrone's personal take on the hottest new products three times a week.

The Daily Download

Fresh every day, an outstanding pick from ZDNet's Software Library.

PC Magazine Extra on CD

32 utilities ready to install; searchable back-issue database; Web site links to more free utilities and the best downloads.

Visit Extra at www.pcmextra.com.

To order, call 800-335-1195 in the U.S. or 303-604-7445 elsewhere.

Standards Time

You can put a shoe in the oven, but that doesn't make it a biscuit, folk singer Pete Seeger once noted. In the same vein, proclaiming your new technology to be an industry standard doesn't make it a standard. Here's my take on who's likely to emerge on top in a couple of standards battles brewing in wireless networking and removable storage.

802.11 (Ethernet) HR vs. HomeRF wireless networking. Most of 1998's bit players in wireless networking have folded their tents, and we're down to 802.11 HR (802.11 stands for wireless Ethernet, and HR stands for high-rate or 11-Mbps) versus HomeRF. The HomeRF crowd cautiously says that 802.11 makes sense in the corporate office but claims HomeRF will be cheaper and therefore will win out in the home or small office for PC networking, as well as for things like game consoles and cordless phones. Trouble is, I see the early adopters of wireless home networking being the people using wireless Ethernet cards in the office notebooks they bring home; they already have half the cost covered and don't need the hassles of balancing two technologies. **The verdict:** Being cheaper won't be enough to carry the day for HomeRF.

CompactFlash vs. SmartMedia. These are the squarish, nonvolatile memory card formats used in digital cameras, MP3 music players, and the like. CompactFlash (CF) is the thicker one, with more capacity; SmartMedia is credit card-thick and slightly flexible. Although they started out neck and neck, I'm seeing more hardware using CF. CF is currently up to 96MB capacity (\$230 street), with 128MB on the horizon, while SmartMedia is at 32MB (\$100). **The verdict:** CompactFlash. Losing more than half your storage capacity is a stiff price to pay for SmartMedia's slightly thinner form factor.

Sony Memory Stick. The Memory Stick is nonvolatile memory that looks like a gray stick of Dentyne gum and competes with CompactFlash and SmartMedia. It has roughly the same capacity as SmartMedia; 32MB (\$100 street) is the largest commercially available Memory Stick. It's used so far only by Sony, in digital cameras, in video cameras for grabbing stills, and in Sony's new digital-music memory stick Walkman (\$430 list). Only recently has Sony announced that others will license the Memory Stick. The Memory Stick's strength is also its weakness: It can incorporate rights-management controls that artists and recording companies will love, but if these

are too one-sided, users will rebel. The Memory Stick also feels more like a product for individual consumers, and that's bad, because a lot of technology gets popular by being bought for business and brought home for weekend duty. **The verdict:** Sony comes up with more brilliant ideas than just about any other company, but so far, the Memory Stick has the scent of Betamax.

IBM MicroDrive. This is a tiny hard disk about the size of a squared-off poker chip. It's not cheap, at \$500, but capacity is excellent: 380MB now and headed for 680MB next year. The MicroDrive could help build a market in tiny appliances that need on-board storage. **The verdict:** Looks like a winner, at least for specialized uses, with no real competitors.

Iomega Click! The Iomega Click! is a 40MB, 2-by-2-inch disk that showed up earlier this year after being noisily introduced in fall 1997. The Click! Drive was intended to be removable storage built inside, say, digital cameras, but Iomega now cites it as a cheap way to back up data from your notebook or to off-load images from your expensive CF or SmartMedia cards using Click! Drives or adapters that cost \$200 to \$300. Trouble is, there are now plenty of CF and SmartMedia readers that connect directly to your PC or notebook (Lexar gives one away with its memory). So Click! would make sense only for, say, people who take lots of digital pictures on extended trips but don't bring along laptops for off-loading them. **The verdict:** Technically intriguing, Click! may be the answer to a question not enough people are asking.

Floppy disk replacements. The Iomega Zip Drive, Imation SuperDisk, and Sony HiFD all want to replace or supplant the much-maligned 1.44MB floppy disk. The Zip Drive has decent capacity with its 250MB version (or the 100MB original), but it can't, of course, read floppy disks. The SuperDisk (a.k.a. LS-120) can, but it's still 120MB. So can the HiFD, at 200MB, but Sony has been slow to deliver in volume. **The verdict:** No knockout winner. Each has adherents, each will survive at least near-term, and all should watch out for CD-RW and then DVD-RAM. ☐



Although CF and SmartMedia started out neck and neck, I'm seeing more hardware using CF.

More on the Web:
Join us online and make your voice heard. Talk back to Bill Howard in our Opinions section.

www.pcmag.com/opinions

WAREHOUSE.com

YOUR #1 ONLINE SOURCE FOR TOP BRAND COMPUTER PRODUCTS!

Get your own Online Ordering Center at:
CorporateAdvantage.Warehouse.com



Networking and Supplies from Leading Manufacturers!

Microsoft

hp HEWLETT
PACKARD

TOSHIBA EPSON



TOSHIBA

Toshiba Satellite 2100CDS Notebook



Item #CP12838
BUY NOW!

Only
\$1299!
Lease!! \$38/mo.*

- 400MHz AMD K6-2 Processor
- 32MB SDRAM (exp. 192)
- 4.0GB hard drive
- 512 KB Level2 cache
- 24X max. variable CD-ROM drive
- 12.1" SVGA DSTN display
- V.90/K56 Flex modem
- Microsoft Windows 98

hp HEWLETT
PACKARD

HP LaserJet 4050N Network Printer



Item #PR14947
BUY NOW!

Only
\$1399!
Lease!! \$41/mo.*

- Prints 17 pages per minute
- HP ProRes 1200 for 1200 dpi quality
- 16MB RAM (exp. 200)
- Prints up to 8.5" x 14"
- Two trays with a 600 sheet capacity
- One open I/O slot
- 10/100Base-TX Ethernet network interface card

Black Toner Cartridge: PR13025 \$94.95

Microsoft

Office 2000



Upgrade only
\$159.95*
after \$49 rebate
ITEM #S42504

INCLUDES:
Microsoft Word 2000
Microsoft Excel 2000
Microsoft Outlook 2000
Microsoft PowerPoint 2000

*Price AFTER publisher's \$40 mail-in rebate for owners of a previous version. Before rebate: \$199.95. Limit 5 rebates per customer. Rebate coupon in box. Expires 12/31/2000.

hp HEWLETT
PACKARD

Pavilion 6535



Only
\$599!
ITEM #CP13133

- 466MHz Celeron processor • 8GB HDD
- 64MB RAM • 40X max. variable CD-ROM drive
- 56K modem • Windows 98

Monitors and speakers sold separately

ViewSonic



19" Monitor

E790 Only
\$419.95
ITEM #MT2800

- 19" (18" viewable)
- 1600 x 1200 @ 76MHz
- .26 dot pitch
- Manufacturer's 3-year warranty

hp HEWLETT
PACKARD

Brio BA200 Desktop



Item #CP13259
BUY NOW!

Only
\$499!

- 433MHz Intel Celeron® processor
- 4.3GB hard drive
- 32MB RAM (256MB max.)
- 40X max. variable CD-ROM
- Windows 98

Monitors sold separately.

SONY

VAIO F340 Notebook



Item #CP12726
BUY NOW!

Only
\$1599!
Lease!! \$50/mo.*
after \$100 rebate

- 306MHz Pentium® II processor
- 64MB RAM (exp. 192MB)
- 6.4GB hard drive
- 24X max. variable CD-ROM drive
- 56K integrated modem
- 13" HPA XGA display

*Price AFTER manufacturer's \$100 mail-in rebate (see store). \$1000. Product must be purchased between 9/1/00 and 1/31/01. Rebate coupon available at www.sony.com/consumers. Call 1-800-368-0766. Rebate coupon must be postmarked by 2/28/01.

IBM

IBM PC300GL Minitower



Item #CP12169
BUY NOW!

Only
\$889!
Lease!! \$27/mo.*

- 466MHz Celeron™ processor
- 8.4GB hard drive
- 64MB RAM
- 40X max. variable CDROM
- 56K modem

Monitors sold separately.

SONY

Mavica
FD91
(shows)



Mavica
FD73 Only
\$499.95!

MODEL	ITEM#	PRICE
Mavica FD73	#7834	\$499.95
Mavica FD83	#7856	\$699.95
Mavica FD88	#7855	\$899.95
Mavica FD91	#7502	\$999.95

- 14X optical zoom
- 1024 x 768 resolution
- 2X floppy disk drive

hp HEWLETT
PACKARD

CD-Writer 9210i



Only
\$359.95!
ITEM #DR11464

- SCSI interface
- 8 x 4 x 32 (all speeds max. variable)
- Blasting! 8X max. variable record

HP CD-R 20 pack
SMC366 \$1.79 each \$35.80

ViewSonic
See The Difference™



Video Projector

PJL1035 As low as
\$4399.99!*
ITEM #AAP1049
Lease!! \$326/mo.*

*With purchase of a notebook computer on same invoice. Call for complete details.

MEMORY



SDRAM DIMM 100MHz

32MB Only
\$149.95
ITEM #MY9369

Fits most desktops
64MB memory only \$299.95
ITEM #MY9370

CALL FOR A FREE COLOR CATALOG!

1-800-469-3619

GET EXPRESS
DELIVERY
OVERNIGHT!

ORDER 24 HOURS A DAY, 7 DAYS A WEEK BY PHONE OR WEB SITE!



DOCKET
ALARM

Find authenticated court documents without watermarks at docketalarm.com.