

SETTING THE STANDARDS

15
YEARS

PLUS: 13 Reviews, 6 First Impressions, 4 Features, and more

BYTE

SEPTEMBER 1990

A MCGRAW-HILL PUBLICATION

63 of the World's Most Influential People in Personal Computing Predict the Future, Analyze the Present

PAUL ALLEN, Microsoft/Asymetrix □ STEWART ALSOP, *P. C. Letter* □ ANDY BECHTOLSHEIM, designer/Sun Microsystems □ GORDON BELL, VAX designer/
Stardent Computer □ JIM BLINN, graphics/Cal Tech □ GORDON CAMPBELL, early chips/Chips & Technologies □ ROD CANON, Compaq □ PAUL CARROLL,
Wall Street Journal □ JOHN CAULFIELD, optics/University of Alabama □ JOHN COCKE, first RISC computer/IBM Fellow □ ESTHER DYSON, *Release 1.0*
□ DOUG ENGELBART, groupware/Stanford University □ DAVID EVANS, graphics/Evans & Sutherland □ FEDERICO FAGGIN, early microprocessors/
Synaptics □ LEE FELSENSTEIN, Osborne-1/Golems □ BOB FRANKSTON, spreadsheet/Lotus □ BILL GATES, Microsoft □ DANNY HILLIS,
Connection Machine/Thinking Machines □ TONY HOARE,
COBOL/DEC □ BRIT HUME, ABC News Chief
Sun Microsystems □ PHILIPPE KAHN, Borland
On Technology □ ALAN KAY,
Fellow □ JOHN KEMENY, BASIC/
programming/AT&T Bell Labs
consultant □ GARY KILDALL,
□ DONALD KNUTH, TeX/
□ TOM KURTZ, BASIC/True BASIC
TRS-80 designer/Adaptive Plus
and BYTEWEEK □ JIM
MARKOFF, BYTE/*New York*
MCCLURE, CASE and
consultant □ TOM
computer-aided engineering/
MINER, Amiga designer/
MORI, superdistribution/
Japan □ NICHOLAS
Media Lab □ TED NELSON,
(Autodesk) □ BOB NOYCE,
Sematech □ KEN OLSEN,
PAPERT, Logo/MIT Artificial
□ CHUCK PEDDLE, early
□ DICK PICK, Pick Operating
POURNELLE, BYTE columnist
and dBASE III/Ratliff Software
C and Unix/AT&T Bell Labs
independent developer □ KEN SAKAMURA,
Japan □ DICK SHAFFER, *Computer Letter*
Microsoft □ MICHAEL SLATER, *Microprocessor*
□ BILL STALLINGS, networking/
C++/AT&T Bell Labs □ JONATHAN
and *EDN News* □ JOHN WARNOCK,
PostScript/Adobe Systems
□ TERRY WINOGRAD, natural
language/Stanford University
□ NIKLAUS WIRTH, Pascal and
Modula-2/Swiss Federal Institute
of Technology (ETH) □ STEPHEN
WOLFRAM, Mathematica/
Wolfram Research □ ED YOURDON,
CASE and object orientation/consultant

programming theory/Oxford University □ GRACE HOPPER,
White House Correspondent □ BILL JOY, SPARC/
□ MITCH KAPOR, Lotus and 1-2-3/
Dynabook and Smalltalk/Apple
True BASIC □ BRIAN KERNIGHAN,
□ JACK KILBY, integrated circuit/
CP/M/Digital Research
Stanford University
□ STEVE LEININGER,
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MANZI, Lotus □ JOHN
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NEGROPONTE, MIT
hypertext/Xanadu
integrated circuit/
DEC □ SEYMOUR
Intelligence Laboratory
microprocessors/THStyme
System/Pick Systems □ JERRY
□ WAYNE RATLIFF, dBASE II
Production □ DENNIS RITCHIE,
□ JONATHAN SACHS, Lotus 1-2-3/
TRON Project/University of Tokyo,
□ CHARLES SIMONYI, software developer/
Report □ ALVY RAY SMITH, graphics/Pixar
consultant □ BJARNE STROUSTRUP,
TITUS, Mark-8 designer/*EDN Magazine*

15th

anniversary
SUMMIT



AN OPEN AND SHUT CASE FOR DELL.

Not only does our laptop cost \$2,500 less than their laptop, it also happens to give you a great deal more for your money.

Like a choice of 20 MB (which brings the price down to \$3,199) and 40 MB hard drives.

Dell's unique "Continuous Power Battery System" that allows you to maintain your screen and save your data, even while you're changing batteries.

An industry standard half-card 8-bit slot that can be used for a network card or other advanced communications. And a dedicated slot for a Dell Data/Fax modem.

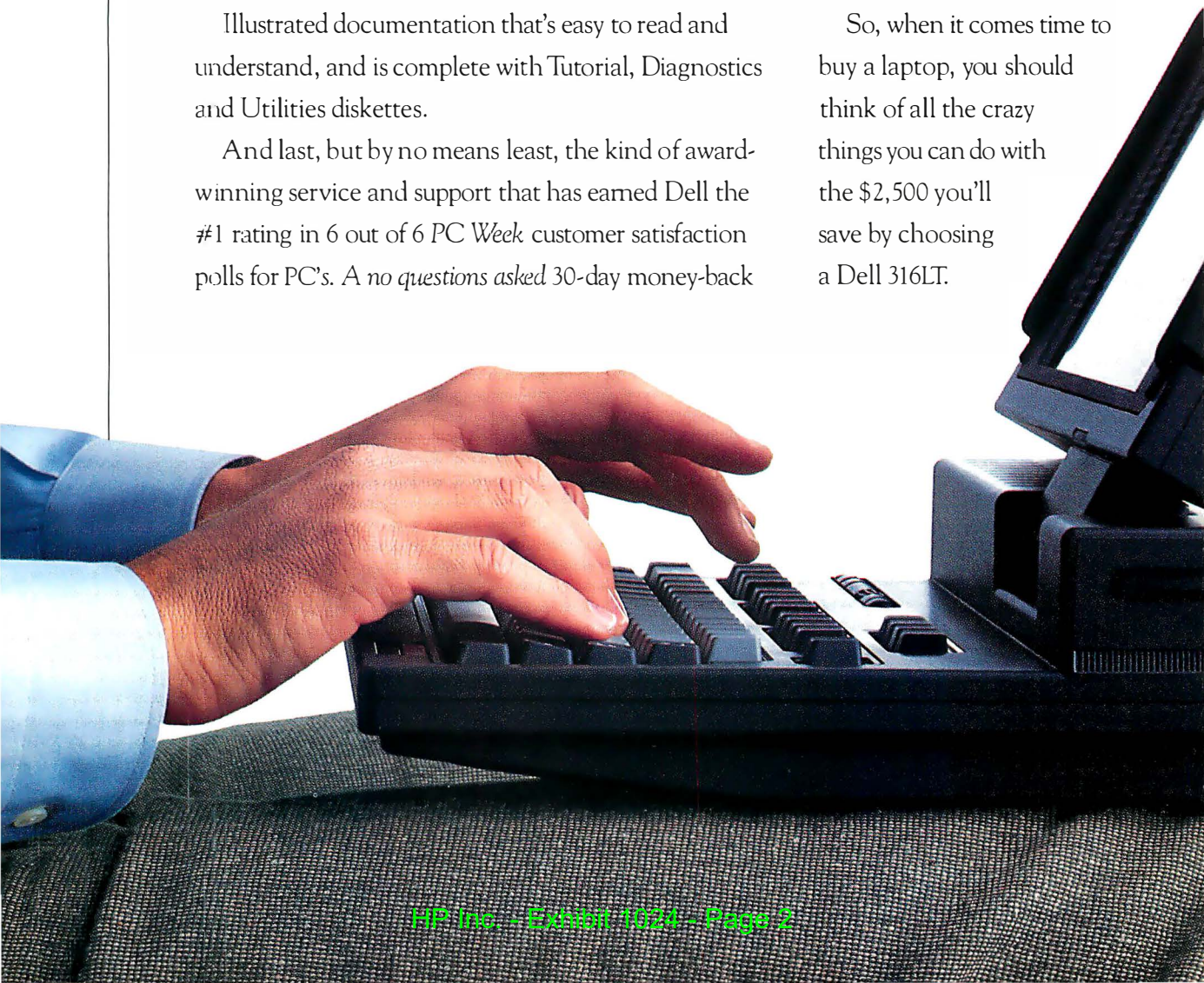
Illustrated documentation that's easy to read and understand, and is complete with Tutorial, Diagnostics and Utilities diskettes.

And last, but by no means least, the kind of award-winning service and support that has earned Dell the #1 rating in 6 out of 6 *PC Week* customer satisfaction polls for PC's. A *no questions asked* 30-day money-back

guarantee and one-year limited warranty with technical support. And a full year of on-site service from the Xerox Corporation. Get that service nearly anywhere in the world, even if you're a thousand miles from your laptop. It means you'll never have to take anything out of service. Because when you buy from Dell, service comes to you.

Give us a call and we'll show you how easy it is to own the Dell 316LT through many purchase and lease plans that are available.

So, when it comes time to buy a laptop, you should think of all the crazy things you can do with the \$2,500 you'll save by choosing a Dell 316LT.



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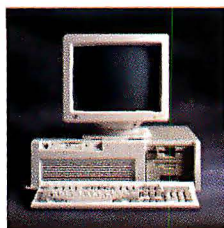
THE NEW DELL 486™ 33 MHz AND 25 MHz EISA SYSTEMS.

The best value in high performance PCs, combining i486 performance, 32-bit EISA I/O bus, and the industry's top rated service and support.

- STANDARD FEATURES:**
- i486 microprocessor running at 33 MHz or 25 MHz.
 - 32-bit EISA bus architecture (downward compatible with ISA).
 - Standard 4 MB of RAM* expandable to 16 MB on system board, using optional 1 MB and 2 MB SIMMs.
 - VGA systems video adapter.
 - Integrated 387 compatible math coprocessor.
 - 5.25" 1.2 MB or 3.5" 1.44 MB diskette drive.
 - 5 half-height drive bays.
 - Dual diskette and hard drive controller.
 - Six 32-bit EISA (ISA compatible), plus two 16-bit ISA expansion slots.
 - High-performance IDE (80 MB, 100 MB, 190 MB), and ESDI (330 MB, 650 MB) hard disk drives.
 - Enhanced 101-key keyboard.
 - 1 parallel and 2 serial ports.
 - 230-watt power supply.
 - 12-month On-Site Service Contract provided by Xerox.^Δ
- **Commercial Lease Plan.**
Lease for as low as \$286/month (433E) and \$233/month (425E).
^ΔXerox Extended Service Plan pricing starts at \$617 (425E) and \$672 (433E).

	433E	425E
80 MB VGA Monochrome System	\$7,899	\$6,399
190 MB VGA Color Plus System	\$8,699	\$7,199
330 MB Super VGA Color System (800 x 600)	\$9,599	\$8,099
650 MB Super VGA Color System (800 x 600)	\$10,799	\$9,299

Prices listed include 1 MB of RAM, 100 MB hard drive configurations also available.



THE DELL SYSTEM 325 25 MHz 386 AND DELL SYSTEM 310 20 MHz 386.

The best combination of performance and value available in their class.

- STANDARD FEATURES:**
- Intel® 80386 microprocessor running at 25 MHz (Dell 325) or 20 MHz (Dell 310).
 - Standard 1 MB of RAM, optional 2 MB or 4 MB of RAM* expandable to 16 MB (using a dedicated high-speed 32-bit memory slot).
 - Advanced Intel 82385 Cache Memory Controller with 32 KB of high-speed static RAM cache.
 - Page-mode interleaved memory architecture.
 - Socket for Intel 80387 or W8187 387 math coprocessor.
 - 5.25" 1.2 MB or 3.5" 1.44 MB diskette drive.
 - Enhanced 101-key keyboard.
 - 1 parallel and 2 serial ports.
 - 200-watt power supply.
 - 8 industry standard expansion slots (7 available).
 - 12-month On-Site Service Contract provided by Xerox.^Δ
- **Commercial Lease Plan. Lease for as low as \$131/month (325) and \$112/month (310).**
^ΔXerox Extended Service Plan pricing starts at \$370 (325) and \$251 (310).

	325	310
40 MB VGA Monochrome System	\$3,599	\$2,999
80 MB VGA Color Plus System	\$4,099	\$3,499
80 MB Super VGA Color System (800 x 600)	\$4,199	\$3,599
190 MB Super VGA Color System (800 x 600)	\$4,699	\$4,099

Prices listed include 1 MB of RAM, 100, 330 and 650 MB hard drive configurations also available.



THE NEW DELL SYSTEM 320LX 20 MHz 386SX.

One of the fastest SX's around.

STANDARD FEATURES:

- Intel 80386SX microprocessor running at 20 MHz.
 - Standard 1 MB of RAM* optional 2 MB or 4 MB expandable to 16 MB (8 MB on system board).
 - VGA systems include a high-performance 16-bit video adapter.
 - LIM 4.0 support for memory over 1 MB.
 - Socket for Intel 20 MHz 80387SX math coprocessor.
 - 5.25" 1.2 MB or 3.5" 1.44 MB diskette drive.
 - Integrated high-performance hard disk interface and diskette controller on system board (ESDI-based systems include a hard disk controller).
 - 1 parallel and 2 serial ports.
 - Enhanced 101-key keyboard.
 - 200-watt power supply.
 - 8 industry standard expansion slots (7 available).
 - 12-month On-Site Service Contract provided by Xerox.^Δ
- **Commercial Lease Plan. Lease for as low as \$98/month.**
^ΔXerox Extended Service Plan pricing starts at \$261.

	320LX
40 MB VGA Monochrome System	\$2,599
40 MB VGA Color Plus System	\$2,899
80 MB Super VGA Color System (800 x 600)	\$3,199
100 MB Super VGA Color System (800 x 600)	\$3,399

Prices listed include 1 MB of RAM, 190, 330 and 650 MB hard drive configurations also available.



THE DELL SYSTEM 316SX 16 MHz 386SX and DELL SYSTEM 210 12.5 MHz 286.

The perfect low profile mainstream computers.

- STANDARD FEATURES:**
- Intel 80386SX microprocessor running at 16 MHz (Dell 316SX) or 80286 microprocessor running at 12.5 MHz (Dell 210).
 - Standard 512 KB of RAM, optional 640 KB, 1 MB or 2 MB of RAM* expandable to 16 MB (8 MB [316SX] and 6 MB [210] on system board).
 - Page mode interleaved memory architecture.
 - LIM 4.0 support for memory over 640 KB.
 - Socket for Intel 80387SX (316SX) and 80287 (210) math coprocessor.
 - 5.25" 1.2 MB or 3.5" 1.44 MB diskette drive.
 - Enhanced 101-key keyboard.
 - 1 parallel and 2 serial ports.
 - 3 full-sized 16-bit AT expansion slots available.
 - 12-month On-Site Service Contract provided by Xerox.^Δ
- **Commercial Lease Plan. Lease for as low as \$73/month (316SX) and \$62/month (210).**
^ΔXerox Extended Service Plan pricing starts at \$196 (316SX) and \$158 (210).

	316SX	210
20 MB VGA Monochrome System	\$1,949	\$1,649
40 MB VGA Color Plus System	\$2,449	\$2,149
40 MB Super VGA Color System (800 x 600)	\$2,549	\$2,249
80 MB Super VGA Color System (800 x 600)	\$2,749	\$2,449

Prices listed include 1 MB of RAM. 2 MB versions of the above systems are available for an additional \$100. 100 and 190 MB hard drive configurations also available.



THE DELL SYSTEM® 316LT 16 MHz 386SX.

This full-featured, battery-powered 386SX laptop costs less than most 286 laptops.

STANDARD FEATURES:

- Intel 80386SX microprocessor running at 16 MHz.
- Standard 1 MB of RAM, optional 2 MB of RAM* expandable to 8 MB (on the system board using 1 MB SIMMs).
- LIM 4.0 support for memory over 1 MB.
- Adjustable and detachable 640 x 480 VGA Liquid Crystal Display.
- One industry standard half-size 8-bit expansion slot.
- Socket for 16 MHz Intel 80387SX math coprocessor.
- 3.5" 1.44 MB diskette drive.
- 83-key keyboard with embedded numeric keypad and separate cursor control keys.
- 1 parallel, 1 serial, and external VGA monitor port.

- Connector for 101-key keyboard or numeric keypad.
- Connector for external 5.25" 1.2 MB diskette drive.
- Two removable and rechargeable NiCad battery packs utilizing Dell's "Continuous Power Battery System" (patent pending).
- AC Adapter.
- 12-month On-Site Service Contract provided by Xerox.^Δ

****Commercial Lease Plan. Lease for as low as \$120/month.**
^ΔXerox Extended Service Plan pricing starts at \$303.

20 MB, 1 MB RAM	\$3,199
20 MB, 2 MB RAM	\$3,399
40 MB, 1 MB RAM	\$3,499
40 MB, 2 MB RAM	\$3,699

The Dell Systems 433E and 425E are FCC Class A devices and for use in commercial environments only. Performance Enhancements: Within the first megabyte of memory, 128 KB (316SX, 316LT and 210) or 384 KB (320LX, 310, 325, 425E and 433E) of memory is reserved for use by the system to enhance performance. Configurations are photographed with optional extras. All prices and specifications are subject to change without notice. Dell cannot be responsible for errors in typographical or photographic. *Payment based on 36-month, open-end lease. Leasing arranged by Leasing Group, Inc. In Canada, configurations and prices may vary. DELL SYSTEM is a registered trademark and Dell and 425E are trademarks of Dell Computer Corporation. Intel is a registered trademark and i486, 486 and 386 are trademarks of Intel Corporation. Source: Dataquest Inc. (SpecCheck Spring 1990). UNIX is a registered trademark of AT&T in the United States and other countries. Other trademarks and trade names are used to identify the entities claiming the marks and names or their products. Dell Computer Corporation disclaims any proprietary interest in trademarks and trade names other than its own. ^ΔOn-site service may not be available in certain locations. Shipping, handling and applicable sales tax not included in the price. For information on and a copy of Dell's 30-day Total Satisfaction Guarantee, limited warranty, and Xerox's Service Contract, please write to Dell Computer Corporation, 9505 Arboretum Boulevard, Austin, Texas 78759-7297. ATTN: Warranty. ©1990 Dell Computer Corporation. All rights reserved.

AD CODE 11E18



Toshiba
T3100SX
16 MHz
80386SX
40 MB
1 MB RAM
VGA
14.9 lbs

\$5,999

**YOU'D HAVE TO
BE CRAZY TO BUY
ONE OF THESE
AWARD WINNERS.**



Dell 316LT
16 MHz
80386SX
40 MB
1 MB RAM
VGA
15.0 lbs

The laptop above is ours. The Dell™ 316LT. It comes with an Intel® 386™ SX CPU running at 16 MHz. 1 MB of RAM, expandable to 8 MB, and a backlit VGA display. With a 40 MB hard drive it weighs 15 lbs. It won the *InfoWorld* Exceptional Value Award, and was one of only two 386SX laptops to win the *PC Magazine* Editor's Choice Award.

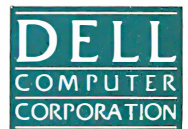
The one with the reddish screen on the opposite

page is theirs. The Toshiba T3100SX. With the same configuration as our laptop. It didn't win the same award from *InfoWorld*. But it did tie with Dell for *PC Magazine* Editor's Choice Award. Which is where the similarities stop.

TO ORDER, CALL NOW.

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HOURS: 7 AM-7 PM CT M-F 9 AM-2 PM CT SAT.



ABOVE AND
BEYOND THE CALL