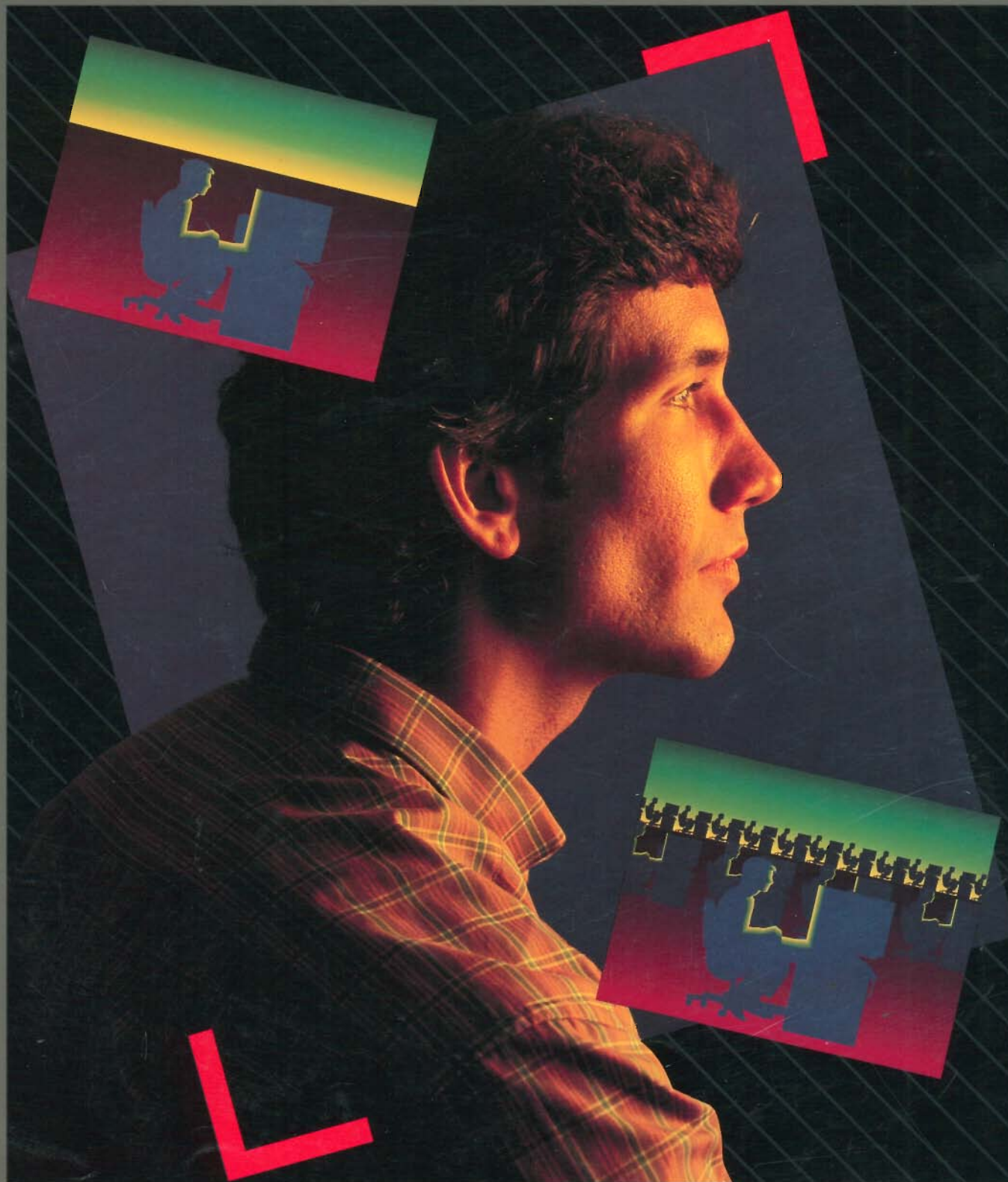


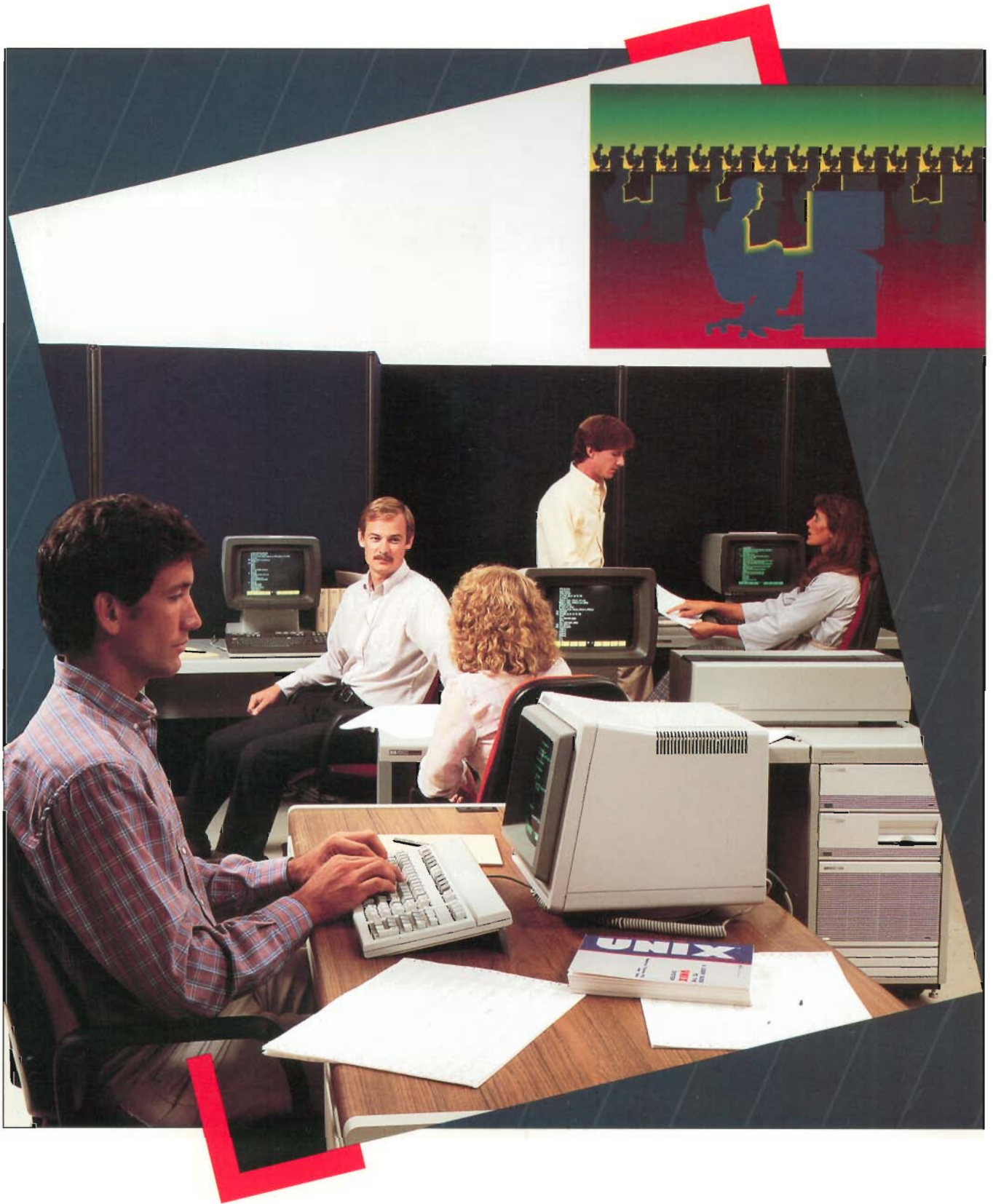
Introducing . . .  
More computing power per engineer.



The HP 9000 Model 550.  
A 32-bit multi-user milestone.



The best multi-user performance for the price.



**HP Computer Museum**  
**[www.hpmuseum.net](http://www.hpmuseum.net)**

**For research and education purposes only.**



*"We're running a large software development lab here so we need a robust system that doesn't crash. We're putting up to 20 engineers on one machine and they are able to support five times the amount of code per engineer with no complaints."*

— Michael L. Kolesar, Manager —  
Software Graphics and Languages  
HP R & D Labs



The new HP 9000 Model 550 is one more calculated step in a series by HP to place superior performance well within each user's reach.

A high-powered 32-bit engine, the new Model 550 offers a compact, quiet and less expensive alternative in 32-bit multi-user or single-user workstation configurations.

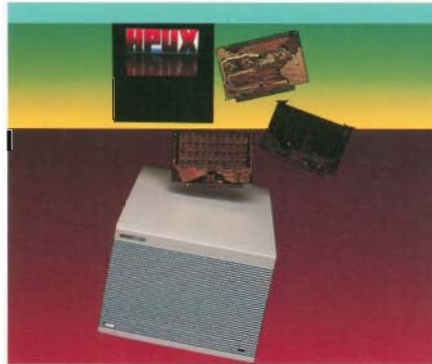
Featuring new floating point math hardware, more memory and enhanced HP-UX, the new Model 550 offers your community more computational power per user for the lowest cost. Its price/performance distinctions are possible as a result of the maturing of our state-of-the-art 32-bit computer family, the HP 9000 Series 500.

### 32 Users and 3 CPUs

You can dedicate one Model 550 to 32 users. You can significantly increase performance and the power and flexibility for each user by adding one or two CPUs. And you can do this without any major rewrite or even recompile of your software. The Model 550 technology saves you the cost of purchasing another complete system.

### Floating Point Math Hardware

The high-speed performance of the new HP floating point math hardware lets you complete computation-intensive problems in less time — 535K double precision Whetstones per second per CPU. If you're doing simulation, modeling and analysis, you can cut considerably the execution time for single- and double-precision floating point math routines. The HP floating point is an integral part of the new CPU board at no extra cost.



The new Model 550's floating point CPUs, denser memory and UNIX enhancements can be added to the current Series 500 family of products to upgrade performance easily.

### Up to 10 Mbyte RAM

You can increase the memory capacity up to 5 or 10 Mbytes through your choice of high-performance 1/2 Mbyte RAM or high-capacity 1 Mbyte RAM boards.

### Enhanced HP-UX

The new Model 550 features the latest enhancements made to HP-UX, the HP operating system derived from and compatible with the Bell Laboratories UNIX\* operating system. Features include added commands, more efficient virtual memory, symbolic debugger for three languages, code segmenter and Device I/O library.

### Streamline software development.

The HP-UX operating system provides an ideal software development environment which includes FORTRAN 77, HP Pascal

and C language compilers, multi-tasking, virtual memory, as well as a rich assortment of HP engineering library extensions such as 2-D and 3-D graphics and IMAGE/Query Data Base Management.

With HP-UX, you can freely interchange languages within a program. For example, you can write main programs in FORTRAN, subprograms in Pascal, and Call Libraries in "C". Symbolic Debug lets you step through code in all three languages to see what goes right or wrong and why. The Source Code Control System lets your entire team coordinate production and track changes. The MAKE tool performs repetitive steps for you.

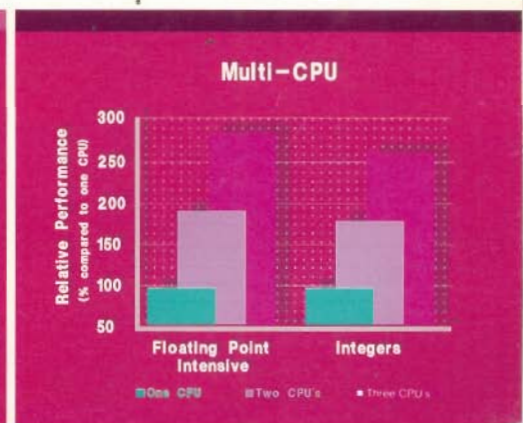
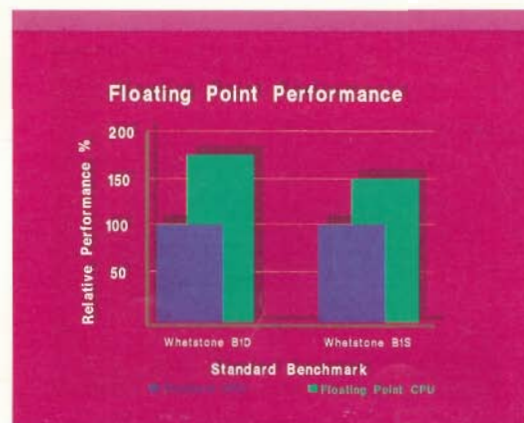
### Simplify system administration.

You can also take advantage of these Model 550 features to boost productivity:

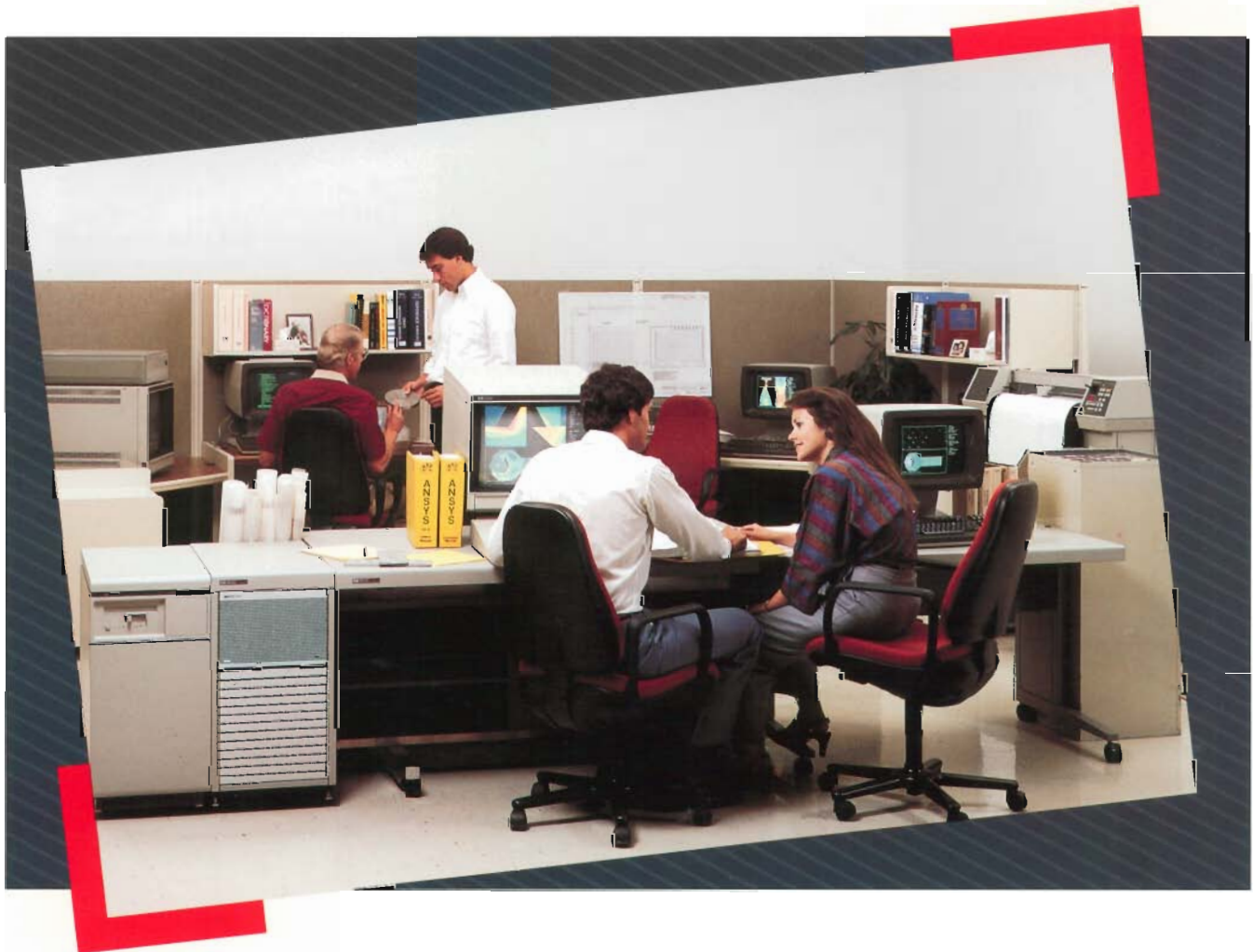
- Source Code Control System for automatic backup,
- Shell Scripts to easily build powerful programs by combining simple HP-UX commands,
- expandable computing power through single-user, 16-user and 32-user licenses, three CPUs and a long list of supported peripherals for the Model 550.

***The new Model 550. More power for less price.***

\* UNIX is a trademark of AT&T Bell Laboratories.



# Power you control to design right the first time.



SOFTOOL is a registered trademark of Softool Corporation.  
Informix is a trademark of iRelational Data Base Systems, Inc.  
SIR/DBMS is a trademark of Sir, Incorporated.  
Oracle is a trademark of Oracle Corporation.

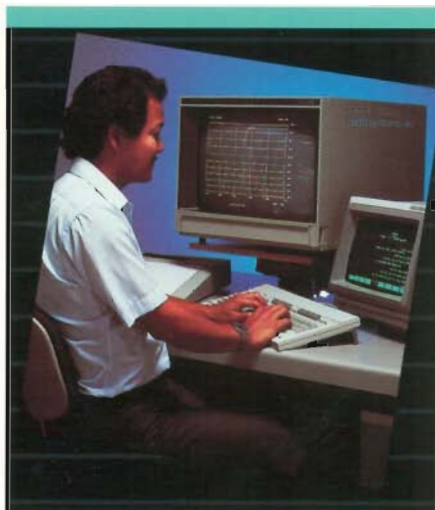
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ANSYS is a registered trademark of Swanson Analysis Systems, Inc.  
GRAFTEK is a trademark of GRAFTEK, Inc.  
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SPSS-X is a trademark of SPSS, Inc.  
BMDP is a trademark of McMasters University.  
Minitab is a trademark of Minitab, Inc.  
Stat80 is a trademark of Statware, Inc.  
DISSPLA is a registered trademark of ISSCO.  
TELL-A-GRAF is a registered trademark of ISSCO.  
MUSE is a trademark of Marc Software, Inc.



*"I/C circuit design of VLSI chips is a real-time experience so response time is critical. We've reduced design release time to only six months by letting each engineer control his own resources through individual workstations and CAD software."*

— Craig Mortensen —  
R & D Sections Manager  
HP Integrated Circuits Division



HP offers the individual engineer the ultimate productivity aid — a personal, dedicated workstation with the power of a mainframe at an affordable price.

The new Model 550 puts engineering power in the hands of your local design group. You and your team have the freedom of high performance right on your desks. You eliminate the need to skip from one computer system to another. And you bypass the line for the mainframe. You get the answers when you choose.

Through this high-powered engine, you can create a highly tuned, locally managed environment — one you can control.

Teamed with key application software and networking, the new Model 550 can help increase your design team's productivity and your company's profits. The computational power of the new Model 550 can help your team shorten the design cycle so you maintain your competitive edge through timely introductions.

## More designs in less time

Our own I/C design experience confirms that when you equip each engineer with the proper tools, you assure what is vital — design right the first time. Using analysis programs on networked Model 550s, we've experienced a five- to ten-fold gain in design productivity.

You, too, can design right the first time at your desk before investing time and money in the costly prototype stages. Using the new Model 550 teamed with appropriate software, for example, you can set up drawings on the screen of your individual workstation, interact with the design, then use the new Model 550 floating point engine for high-speed simulation.

## The ideal match for ME

You can now team the sophistication and quality of key ME packages with a large number of users within your group through the price/performance of the Model 550.

Through the Model 550's multi-tasking, for instance, you can run analysis in the background while developing new finite element models in the foreground. You can handle even more tasks, at little extra cost, by adding more CPUs.

## For computer-aided design . . .

ANVIL-4000®, teamed with the Model 550, is a 2-D and 3-D integrated design, management information and manufacturing system. It allows you to automate the complete design and carry through to numerical control. With ANVIL-4000, you can easily

customize your own environment.

Graftek™, combined with the Model 550, is a family of integrated applications featuring 2-D or 3-D drafting, numerical control, finite element modeling, solid modeling and plastic mold design.

## For modeling and analysis . . .

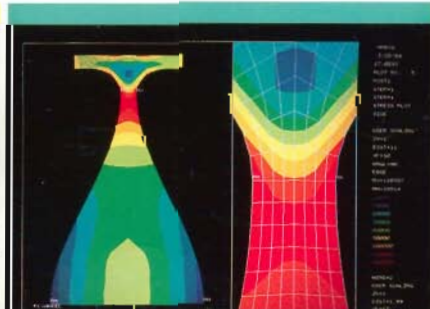
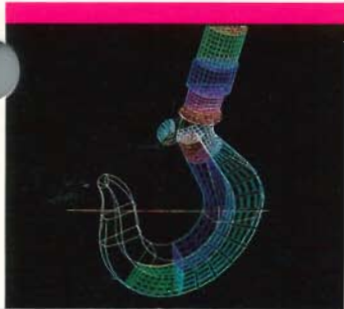
ANSYS® is a powerful large-scale finite element program that solves several classes of engineering problems including generation, solution and review of results.

PATRAN® is a general-purpose, interactive graphics system for solid modeling, finite element modeling and finite element analysis. Combined with the new Model 550, PATRAN offers state-of-the-art performance for product design and analysis.

## Your choice of UNIX-based applications

Rest assured you'll be able to take advantage of your installed base of UNIX software with no modification. And you have access to a growing number of UNIX-based problem-solving applications for the Model 550 including: SOFTOOL® for comprehensive software development; SIR™, Informix™ and Oracle™ for database management; SPSS-X™, BMDP™, Minitab™ and Stat80™ for statistics; DISSPLA® and TELL-A-GRAF® for graphics; and MUSE™ for word processing.

***The new Model 550. Place yourself in control.***





# Build an HP community of power.



'Round the clock reliability — you can rest comfortably knowing the Model 550 can keep on running tasks for you overnight.





## The HP 9000 Family

The HP allegiance to our customers provides a clear growth path — a compatible family of computers. The new Model 550 is the latest testimony.

With the introduction of the new Model 550, HP continues to make a strong commitment to HP-UX as a standard operating system for our technical computer products so you can preserve your software investment.

Through the HP 9000 family, you can grow into a complete HP-UX computing environment gradually. The Series 200 are compatible workstations based on the Motorola 68000 family of powerful 16/32 bit microprocessors. This series is "plug compatible" with a large number of HP instruments so you can easily configure your own test and measurement system. The 32-bit Series 500 features the power of one million instructions per second and runs the HP-UX operating system.

## One vendor. Not several.

The beauty of the HP family is the advantage of choice. You can start off small and add capability and power in whatever proportions needed. And you can configure your total system through one vendor. The HP 9000 family covers a range of peripherals, standard interfaces, and your choice of datacomm capabilities.

## Compact packaging

The new Model 550 is the latest result of HP's effort across the HP computer line to package power in compact, convenient sizes. It can be placed in a mini-rack, on a CAD worktable, or in a taboret, a handy cabinet on wheels that rolls under your desk.

Plus the Model 550 features a noise level of under 50 decibels. You can use the Model 550 in a normal office environment without noise buffering or air conditioning.

## Lowest cost of ownership

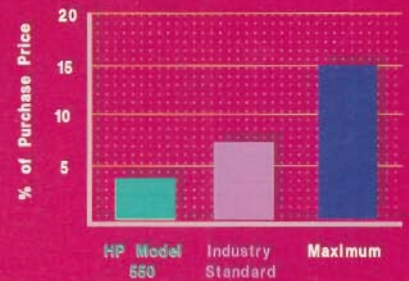
System reliability should be a key consideration when comparing computing systems. Take a hard look at life cycle costs — not just the purchase price alone. Be sure to add in the annual maintenance costs. It's to your advantage to compare.

You'll see that HP has one of the lowest costs of ownership in the industry.

HP has earned a reputation for quality — a reputation documented in low HP monthly maintenance charges. These charges, representing failure rates and cost of repair, are published information available from most computer manufacturers.

As a member of the HP 9000 family, the new Model 550 typically yields a figure slightly less than three percent per year for on-site service. The industry average is seven percent.

Annual Maintenance Costs



## HP — all the best in one.

### Price/Performance

Continued developments in HP technology will provide increased performance and capability at even lower costs within our compatible family of engineering workstations.

### Applications Software

HP will focus on supplying high-quality design tools by building our worldclass CAE offering through our aggressive HP-proprietary and Third Party Programs.

### Instrumentation

HP will continue to merge its measurement expertise and computational strength into complete design solutions.



## A secure future with HP

You can be confident your investment in HP solutions today will be paid back in accelerated product development for years to come. Our continued investment in R & D will result in further engineering advancements made available to you. In 1983, for example, our research and development expenditures totaled \$493 million, or 10% percent of our sales revenues. The new Model 550 is one result — the launching pad for others.

*The new Model 550. Add up the HP advantages in your favor.*





# Specifications at a glance!\*

## System Components

RAM (standard):	
9050A Base System	512 Kbyte
9050AT Single-User Bundled System	1.5 Mbyte
9050AM Multi-User Bundled System	1.5 Mbyte
RAM (optional)	Up to 10 Mbytes in 2 Mbyte increments, or up to 5 Mbytes in 512 Kbyte increments.
Service/Diagnostic Panel	Standard front panel with LED indicators.
Floating Point CPU	Single is standard; up to two additional CPUs are supported.
I/O Processors	Single is standard; up to one additional is supported. Each IOP adds 8 DMA-capable slots.
System Software	HP-UX single-, 16-, 32-user licenses available. FORTRAN 77, Pascal and C Compilers plus additional software options.
Standard Interfaces	HP-IB, RS-232, GPIO, 8-channel multiplexers
Datacomm	RJE Emulator, HP-UX asynchronous communication commands (cu, uucp, uux), HP LAN 9000 - local area network.

## Physical Specifications

Width	32.5 cm (12.8 in.)
Depth	53.0 cm (20.9 in.)
Height	23.4 cm (9.2 in.)
Shipping weight (typical)	18 - 27 kg (40 - 60 lbs)

## Environmental Specifications

Temperature:	
Operating	0° to 55°C
Storage	-40° to 75°C
Humidity	95% RH at 40°C, machine operating
Altitude	15,000 ft. (570 Mbars barometric pressure), machine operating
Current requirements/ voltage ranges	90 - 108 Vac, 9A 108 - 125 Vac, 7.6A 198 - 250 Vac, 4.3A
Maximum power dissipation	580 Watts (2200 BTU/hr.)
Frequency range	48 - 66 Hz
Noise level	Less than 50 dBA

\* Data subject to change without notice.



For more information about the HP 9000 family of engineering systems, call the HP office nearest you.

### United States

#### East:

Hewlett-Packard  
4 Choke Cherry Road  
Rockville, MD 20850  
Tel: (301) 258-2000

#### South:

Hewlett-Packard  
P.O. Box 105005  
Atlanta, GA 30348  
Tel: (404) 955-1500

### Midwest:

Hewlett-Packard  
5201 Tollview Drive  
Rolling Meadows, IL 60008  
Tel: (312) 255-9800

### West:

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3939 Lankershim Blvd.  
North Hollywood, CA 91604  
Tel: (213) 506-3700

### European Offices:

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Route du Nant-d'Avril, 150  
P.O. Box CH- 1217 Meyrin 2  
Geneva, Switzerland

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Mississauga, L4V 1M8  
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Palo Alto, CA 94304  
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