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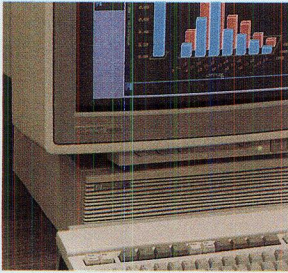# UPDATE

COMPUTER SYSTEMS FROM **HP**
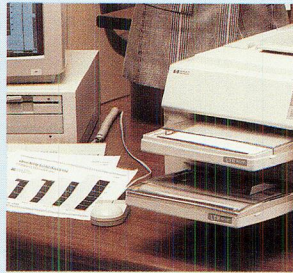
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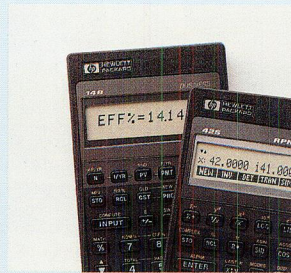

HEWLETT PACKARD

Four new SNA products improve HP 9000 Series 800-to-IBM communications

HP 9000 Series 800-to-IBM communications has been improved with several new System Network Architecture (SNA) products: HP-UX SNALink and HP-UX Gateway/SNALink, plus two standalone services, HP-UX SNA3270 and HP-UX SNA3770.

SNALink products

Available in two configurations—standalone and gateway—the SNALink products provide the physical connection, manage the SDLC line, and emulate the major features of an IBM 3274 cluster controller.

The standalone SNALink configuration is designed to connect an HP 9000 Series 800, not on a LAN, to an IBM System/370 mainframe. One or more standalone services, HP-UX SNA3270 or SNA3770, is required.

The gateway configuration is used to connect an HP 9000 Series 800, on an NS LAN, to an IBM System/370 mainframe. The HP 9000 Series 800 that has the HP-UX Gateway/SNALink serves as a nondedicated gateway for the other HP 9000 Series 300 or 800 on the LAN to access the IBM host.

HP 9000 Series 800 SNA products have two interfaces on the same card: an RS-232-C for speeds up to 19.2 kbps, and a V.35 for speeds up to 64 kbps.

SNA3270 products

The HP-UX SNA3270 products for the Series 800 allow interactive communications between an HP 9000 Series 800 and an IBM System/370 mainframe using SNA3270 protocols. This emulation provides interactive access to the IBM mainframe's TSO, CICS, IMS, and CMS applications.

SNA3770 products

The HP-UX SNA3770 products emulate the features of an IBM 3777 Model 1 communications terminal. This emulation provides communications with job entry subsystems: JES2 and JES/NJE. An HP 9000 with SNA3770 provides an effective way to send data and job control commands to run applications to an IBM host.
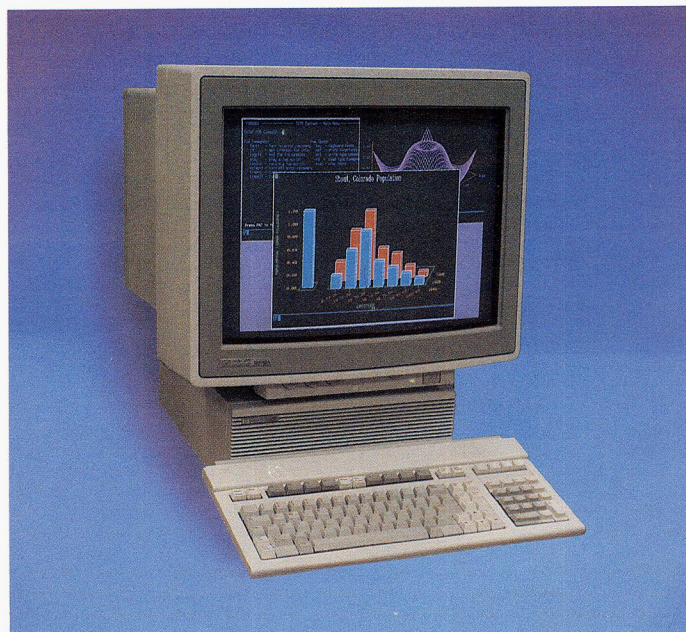
Typical uses

The HP-UX SNA3270 and HP-UX SNA3770, with the appropriate HP-UX SNALink, make a number of applications possible:

Bulk database access/update: SNA3270 or SNA3770 may be used to transfer files or entries to update a centralized database.

As an SNA node: With SNALink, SNA3270, and SNA3770, you have interactive and batch communications with an IBM host. With a full SNA node, application programmers may do development work using SNA3270, and run large programmatic or large jobs with SNA3770.

Monitoring applications or processes running on several IBM hosts may be accomplished with HP-UX windows or terminals and multiple SNALinks on a single workstation.

*For more information, check **A** on the HP Reply Card.*

SNA3179G allows interactive communications between an HP 9000 Series 300 and an IBM System/370 or compatible mainframe using SNA communications and 3270 data stream.

New emulator enhances HP 9000 Series 300-to-IBM connectivity

Now, an HP 9000 Series 300 workstation running the HP-UX operating system and the X Windows System can emulate an IBM 3179G color-graphics display station.

A new member of the HP 9000 Series 300-to-IBM communications family of products, the HP-UX SNA3179G emulator uses a bit-mapped color console attached to an HP 9000 Series 300 workstation. The 3179G allows you to access the IBM mainframe in an interactive mode. It provides vector graphic and alphanumeric display, as well as alphanumeric and APL keyboard emulation.

Available in two configurations

The SNA3179G product is available in two configurations: standalone and gateway. The standalone configuration is for a Series 300 that is not on a LAN, and has its own HP-UX SNALink. The gateway configuration is required for Series 300s that are on a LAN and may or may not have a link of their own, but can use an HP 9000 system with a Gateway/SNALink as a gateway to access the IBM mainframe.

The SNA3179G uses features of the HP X Window System to create, move, shuffle, iconify, or refresh windows. The window manager provides the flexibility of executing several HP-UX applications in a multitasking mode. And, you can use the HP PaintJet color-graphics printer for hard-copy output. X Windows version 11 is a requirement for HP-UX SNA3179G.

SNA3179G features include:
- Vector graphics and alphanumeric support
- Seven-color plus background support
- 24- and 32-line support
- Program symbol support (PSA, PSB and ISS)
- Hard-copy support with X Windows

HP-UX SNALink and HP-UX Gateway/SNALink support one or more of the following services running concurrently on an HP 9000 Series 300 workstation: SNA3179G, SNA3770, and SNA3270.

*For more information, check **B** on the HP Reply Card.*

New laser printer

High-end HP 9000 increases performance by up to 50%

The most powerful member of the HP 9000 Series 800 family, the Model 855S offers up to 50% more performance and 33% more user support than the Model 850S. It expands the Series 800 family's ability to execute applications such as modeling, simulation, scientific analysis, database, factory automation, accounting, manufacturing, and software development.

As a member of the Series 800 family, the Model 855S uses the same peripherals, I/O cards, application software, and standards-based HP-UX, networking, database, and graphics—offering high performance for up to 400 users.
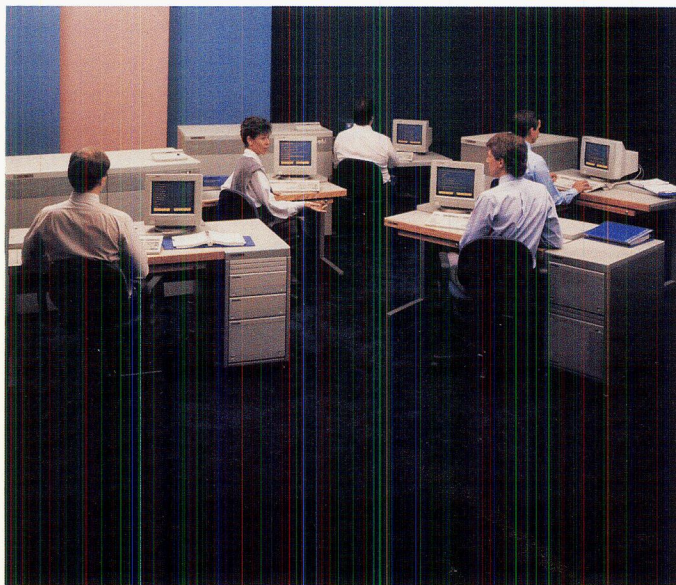
High productivity and low cost-of-ownership

Using an advanced implementation of HP's proprietary NMOS III VLSI integrated circuit technology, the Model 855S delivers performance in the range of the VAX 6240 and VAX 8820. And, like its Series 800 HP Precision Architecture counterparts, the Model 855S requires fewer parts—resulting in excellent hardware reliability and lower support costs.

The Model 855S is also available as a board upgrade to the Model 850S. If you own or are considering a Model 850S, you can be assured that there is room to grow within the HP 9000 family.

The Model 855S and 850S-to-855S upgrade will be available in the summer of 1989. If your application requires delivery of a Model 855S before that time, you can purchase a Model 850S and an 855S upgrade to begin your development early.

For more information, check **C** *on the HP Reply Card.*

HP-UX is HP's version of AT&T's UNIX System V operating system. UNIX is a registered trademark of AT&T in the U.S. and other countries.

Extending the Precision Architecture-based product line, the Model 855S offers high performance for up to 400 users.

When Hewlett-Packard introduced the first desktop laser printer in 1984, a new price/performance standard was set. The HP LaserJet Series II printer maintained that leadership. Now, HP sets the standard again, with the new HP LaserJet IID printer, a desktop dual-tray duplex laser printer.

Based on Canon's new eight-pages-per-minute (ppm) LBP-RX engine, the HP LaserJet IID printer includes the following features:

HP LaserJet Series II printer compatibility

The HP LaserJet IID printer is compatible with HP LaserJet Series II printer software packages and fonts (both cartridge and disk-based soft fonts).

Like the LaserJet Series II printer, the LaserJet IID printer has an easy-to-use front control panel. The new printer also uses the same EPS toner cartridge and paper trays (letter, legal, executive and A4 sizes) as the LaserJet Series II printer.

More paper handling flexibility

Two 200-sheet input trays and two manual-feed slots are accessible at the same time. You can put letterhead paper in one tray and plain paper in the other. Or, use different sizes of paper—by putting legal paper in one tray and letter paper in the other. Heavier paper, labels, and overhead transparencies can be used in the upper tray. By adding the envelope-feeder accessory, you can print envelopes and then choose paper from one of three other sources—the top tray, the bottom tray, or the manual-feed slot on the bottom tray.

More paper capacity

The new printer has a total of 400 sheets input and a maximum monthly print volume of 16,000 pages or images per month (compared to the HP LaserJet Series II printer's maximum monthly print volume of 12,000 pages per month).

offers advanced paper handling

The HP LaserJet IID printer with two paper trays, duplex printing, and automatic envelope printing provides high-capacity paper handling for the business office.

Automatic two-sided and duplex printing

Two-sided (duplex) printing adds capacity by turning 400 sheets of paper into 800 printed pages of information. This feature can be turned on and off easily through the software or from the front control panel. Duplex printing offers significant savings in paper purchase, filing, storage, and mailing costs.

Easy envelope printing

The envelope-feeder accessory adds a third input tray for printing a batch of envelopes or envelopes alternated with paper. The feeder holds up to 50 envelopes (commercial #10, Monarch, or DL). Manual paper feed through the lower paper tray is still available with the envelope feeder installed on the printer.

More fonts

Twenty-four fonts come with the HP LaserJet IID printer. Fourteen fonts are internal and 10 come on the HP 92290S2 font cartridge that is shipped with each printer. The printer can rotate a font into either portrait (vertical) or landscape (horizontal) orientation.

The HP LaserJet IID printer works with the HP Vectra PC, IBM and IBM-compatible PCs. It comes with 640 Kbytes of standard memory. You can add on 1-, 2- or 4-Mbyte memory boards to expand this to 4.6 Mbytes of memory.

*For more information, check **D** on the HP Reply Card.*

NS PAD support enhances X.25 networking capabilities for the HP 3000

The NS X.25 3000/V network link soon will support remote packet assembler/disassembler (PAD) terminals and printers over public and private X.25 packet switched networks (PSN).

The NS X.25/V link is the X.25 connection for MPE/V HP 3000 computers. It can be used with NS 3000/V network services to provide access to services such as network file transfer (NFT), virtual terminal (VT) and remote data base access (RDBA). The link can also be used in programmatic mode for special applications such as connecting to non-HP computers.

NS PAD support allows communication between an HP 3000 host and terminals and printers attached to a PAD. The PAD can either be public, with the service provided by the PSN, or a private PAD such as the HP 2334. Terminals connected to a public PAD will access the HP 3000 as session devices. This allows the user to log on to the system and access applications on an MPE/V HP 3000 host. Terminals connected to the HP 2334 may access the HP 3000 either as session or application devices.

Other features of NS PAD support include:
- Support of character mode and VPLUS applications
- Use of write concatenation to improve performance and reduce line costs
- Remote spooling for printers with termtype 18 and 26
- PAD access security based on calling address verification

For more information about the NS X.25 3000 network link and the DS to NS upgrade, contact your HP sales representative.

Improved multivendor and multilingual communications with new release of HP DeskManager

Hewlett-Packard has enhanced its organizational-communications products with a new release of HP DeskManager that significantly improves functionality.

HP DeskManager B.03.00 includes support for X.400 communications via HP OfficeConnect to X.400, support for Japanese and other 16-bit languages, and programmatic access to HP DeskManager via HP DeskManager Intrinsics (see accompanying article).

With HP OfficeConnect to X.400, you can communicate more effectively with external companies, for example, suppliers, distributors and dealers, who can all use X.400 as the common communication standard. Communication can also be provided to public mail systems that adhere to this standard.

Transparent integration

Communicating to other X.400 users is easy, as the existing HP DeskManager interface is used to send and receive messages. All the user has to do is specify a name to get the message across to another vendor's system—just as simple as sending to another HP DeskManager user.

16-bit language support

HP DeskManager is now localized in Japanese, Chinese and Korean, and further modified for Arabic and Hebrew. With these localized versions, you choose the language for screens and system prompts to be displayed in (English or the local language). Also, you select the language for writing text. A local company in the Far East can use English as the international language for communicating, and at the same time use all screens in their local language. For example, you may choose a screen displayed in Chinese and type text in English.

For more information, check **E** *on the HP Reply Card.*

Get access to HP DeskManager services from within your own application

HP DeskManager Intrinsics is a powerful new product that extends the application-integration capabilities of HP DeskManager. With HP DeskManager Intrinsics, you can access the core HP DeskManager Services— electronic mail, calendar, directories and text converters—from within your own application.

These powerful capabilities provide a higher level of integration within your total business solution.
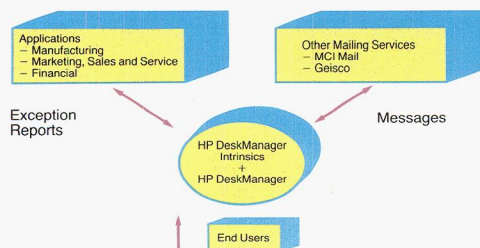
Automatic and timely distribution of reports and messages

User Intrinsics allows your application to log on as if it were an HP DeskManager user, and then send and receive items on behalf of that user. For example, a manufacturing application can provide automatic distribution of exception reports informing personnel of abnormal stock levels or production

problems. It also provides access to the calendars of HP DeskManager users, and the ability to insert and read standard calendar items. User Intrinsics can also be used where the application is the principal user interface but requires a distribution service.

Use Gateway Intrinsics to develop applications that connect HP Desk-Manager to other messaging services

Gateway Intrinsics allows your application to log on as an HP DeskManager gateway (external connection), and send or receive items on behalf of any user associated with that gateway. Gateway Intrinsics is a superior alternative to the HP DeskManager Foreign Service Connection, offering improved performance, greater functionality, and easier implementation.

Supporting Intrinsics

Supporting Intrinsics provides support for the User and Gateway products. It enables your application to look in the HP DeskManager directories for a given name or list of names, and to convert a document from one format to another.

HP DeskManager Intrinsics requires HP DeskManager version B.03.00 or later installed on an HP 3000.

For more information, check **F** *on the HP Reply Card.*

Low-cost business and powerful scientific calculators added to the HP line

With six new models already introduced this year, the Hewlett-Packard line of calculators has expanded again. The HP-14B extends HP's offering of algebraic-entry calculators while the HP-42S adds to HP's line of Reverse Polish Notation (RPN) machines.

HP-14B business calculator

The easy-to-use HP-14B is designed for business students. It has a solid core of standard business functions, such as time value of money for loan calculations plus extra features such as return on investment, break-even analysis and inventory-turnover rate.

Its alphanumeric display and interactive functions make the HP-14B easy to use. Keyboard functions that work together are linked by lines on the keyboard to show that they interact. To find percent of change, for example, key in the old value and press OLD, key in the new value and press NEW,

The HP-14B business calculator labels values for easy identification. The HP-42S RPN scientific calculator displays complex numbers the same way as they are written on paper.

then press %CHG for the answer. The HP-14B even labels entries and results so it's easy to identify each value.

The HP-14B also features two-variable statistics with linear regression for statistical analysis, four curve-fitting models for forecasting and list-based cash flows.

HP-42S RPN scientific calculator

The HP-42S offers powerful features not found on other calculators and is ideal for engineers because of its complex-number and matrix capabilities. Calculations are

easy to do because complex numbers are displayed just as they are written on paper. And, only the HP-42S allows complex-number calculations to be done in polar mode.

With a sophisticated matrix editor that prompts for inputs, only the HP-42S allows computations to be done within matrix elements and allows complex numbers to be used as matrix elements. The matrix editor is particularly useful for solving simultaneous equations.

The HP-42S also has an RPN equation solver that solves for any variable. Any user equation needs to be programmed only once. Known values for variables are entered and assigned to menus in the display and then the HP-42S solves for the missing value. When the situation changes, it's a simple matter to enter new values for variables.

HP-41C/CV program compatibility

Thousands of existing programs for HP-41C/CV calculators can be keyed in and run on the HP-42S, saving valuable program-development time. The RPN logic system also saves time by eliminating the need for using equal and parenthesis keys.

*For more information, check **G** on the HP Reply Card.*

New versions of Microsoft Windows improve system response time

Two new versions of Microsoft Windows, Windows/286 version 2.1 and Windows/386 version 2.1, are available now for your HP Vectra personal computers.

Performance gains with additional conventional memory

These new products make additional conventional memory (approximately 50 Kbytes) available to applications running on systems configured with extended memory. This additional memory can substantially

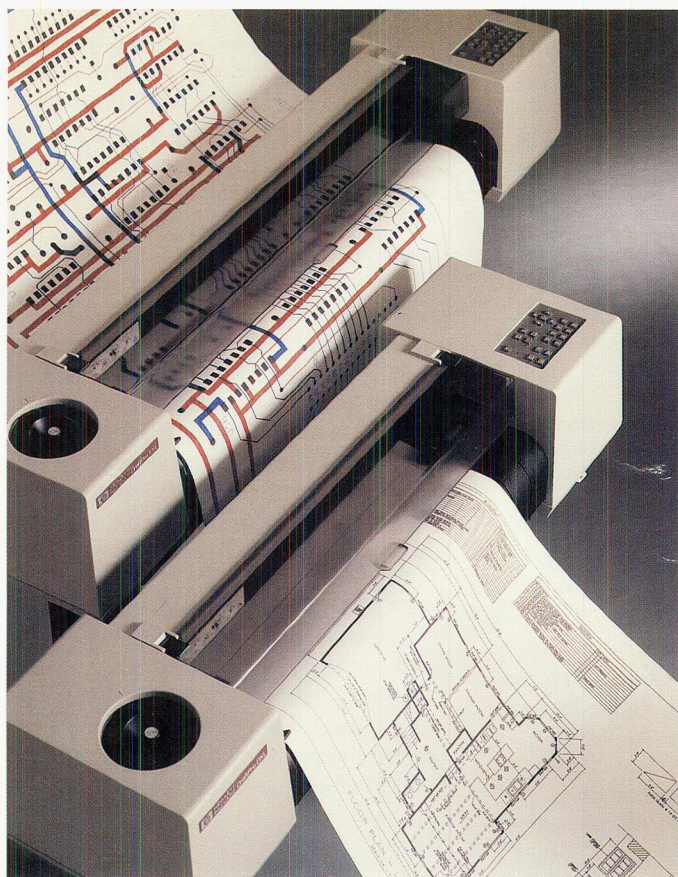enhance system response with performance gains of up to 50%.

Applications written for Windows 2.0, such as Microsoft Excel and Aldus PageMaker, will work with 2.1. Windows/286 will be the platform for the HP NewWave environment, while Windows/386 unleashes the multitasking potential of Intel 80386-based machines such as the HP Vectra RS and QS PC lines.

Windows/286 works with Intel 80286-based PCs such as the HP Vectra ES line. It will also run on 8086-compatible machines such as the HP Vectra CS PC, but without the memory enhancements described above. Windows/286 will also run on 80386 machines, and will be required for HP Vectra QS and RS PC users planning to run the HP NewWave environment.

Wide range of peripherals supported

Windows uses a graphics-based display to make the interface between the user and the program more intuitive. Programs written for Windows enjoy this intuitive graphic interface as well as comprehensive support for a wide range of PC peripherals and monitors, including the complete line of HP peripherals.

For more information, contact your HP sales representative.

With 2.8 g maximum (diagonal) acceleration and 80 cm/s (32 in./s) velocity, the HP DraftPro DXL and EXL plotters produce plots quickly.

Drafting-plotter line expands with new midrange products

HP has added two members to its DraftPro series of plotters, the DraftPro DXL and the DraftPro EXL drafting plotters.

Wide range of media sizes and excellent line quality

The two new plotters complete the low-priced HP DraftPro plotter series with a wide range of media sizes and excellent line quality for such drafting applications as architectural/engineering/construction (A/E/C), mechanical design and electronic design.

The HP DraftPro DXL can plot on A4/A- through A1/D-media and the DraftPro EXL accepts A4/A- through A0/E-media. (Standard ISO, ANSI, and architectural sizes.)

With a mechanical resolution of 0.0127 mm (0.0005 in.) and an addressable resolution of 0.0254 mm (0.001 in.), the DraftPro DXL and EXL plotters draw well-defined lines, smooth curves, and crisp characters that help you and your designs look their best.

Compatible with leading systems

HP DraftPro DXL and EXL plotters were developed for both experienced and first-time PC-CAD users. They run with leading personal-computer and engineering-workstation-based CAD systems.

Industry-standard HP-GL for user programming

HP DraftPro DXL and EXL plotters share a key feature of the HP drafting plotter family: industry standard HP-GL for user programming. HP-GL compatibility means the new plotters use the same software as other HP pen plotters.

Two user-installable extended buffer options are available as accessories for increased productivity. Available in one- and two-Mbyte formats, these easy-to-install cartridges let you download an entire plot, freeing your computer for other tasks.

*For more information and a sample plot, check **H** on the HP Business Reply Card.*

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