PrintScreen

Vol. XIV August 1996 No. 08

Newsletter of Stanford / Palo Alto Users Group for PC

A Non-Profit / Educational Organization

General Meeting

August 28th 7:30PM @ EPRI

Hewlett - Packard Scanners and Printers

Internet SIG News

August 27th
7:30 PM
call
Bob Mitchell
(415) 368-9530

Hardware SIG News

See page 5

Inside News

Words from the Prez

Bob Mitchell

Extra! Extra! Extra!

All SPAUG Members To Receive $10,000

Well , now that I have your attention, here?s the deal. Every member of SPAUG who is interested in participating will be given $10,000 dollars to be used to invest in a growth stock of their choice selected from one of the stock exchanges that will become a part of a SPAUG portfolio. At every general meeting we will take a few minutes to pull up our portfolio on America Online to determine how much we are ahead (or behind) as a group and who is the most astute investor in the group to date. At the end of a year's time we will note who the top three investors are and award them prizes. That?s the good news. The bad news is ....it?s a fantasy portfolio as is the $10,000 that you will have been awarded. But you must admit, your interest was held to this point. It should be fun to see how well our shrewd investors can make (or lose) for the club, and at the same time it might even stir up a little interest in the market. You might want to start doing a little research and be ready at our upcoming meeting to pick your favorite 3 stocks. There will only be one stock for each member and each member must pick a different stock. That?s the reason for three choices. If somebody has already selected your favorite stock, you will have a second or third choice. Good Luck!

The second meeting at EPRI went quite well. All computers were operating as they were designed to do. Kendric brought his new toy, an IBM laptop and left his Mac at home. A confession, the scurrilous remarks about his Mac in the previous Words from the Prez turned out to be a false and an unfair accusation of a noble device. The problem with its failure to feed a picture to the projection system was a connection problem. The Mac lives!

We now have an operating SIG for a very substantial group of people interested in building a computer. There was also interest expressed in an Internet SIG, and we actually had a hastily organized mini-SIG meeting a week after the general meeting. We'll open it up to additional members at the next meeting.

The upcoming meeting should be an interesting one for those who are thinking about eventually hooking up a scanner, or adding an inexpensive color jet printer to their computer corner. Kevin Tiffin of Hewlett Packard will be there for a hardware demo. A number of people indicated an interest in scanners and color printers on the questionnaire that they returned, so here's your chance. Please start thinking about some of the problems you are having with your system and write down important info (like error messages) and bring them to the meeting for Random Access. We are surrounded with a lot of computer knowledge and this is your opportunity to get some answers. We may have some other surprises to assist us in getting answers to questions. Don't miss it!

I hope to see you there. ✉

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SPAUG Staff Meeting

Bob Mitchell - July 31, 1996

Attendance: Beverly Altman, Brian Christopher, Bob Mitchell, Kendric Smith, Walter Varner

General Meeting of August 28
Format: In order to move up the break time to approximately 8:30 the format of this meeting and all successive meeting will be changed. We will have announcements, Disk of the month, and the guest speaker preceding the break with Random Access and the Drawing following the break.

TV (update) Raffle winners from last meeting, Article on Internet Q&A, Mini-map of EPRI location, Disk of the month list plus other articles. We will request updates of E-Mail addresses, then provide an insert in an upcoming issue of PrintScreen. The Web Page will be updated at the same time.

General Meeting Programming Ideas
It was suggested that we establish a SPAUG Fantasy Stock Portfolio. Each member would have the opportunity to select their favorite stock to be added to the "SPAUG" portfolio and we would track the portfolio through America Online at each meeting to determine who is the most successful investor in our group. Details will be announced in the

Guest
Kevin Tiffin of Hewlett Packard
Subject: Color Printers, Scanners
Laptop will be available from Bob Mitchell for demos - DOM demo (Robert & Bob Mitchell)

Upcoming meetings
Location, dates and guests September 25 (Guest TBA)

SPAUG Constitution revisions
Clark Moore is working on the revised edition of the Constitution and will have a draft available by the next meeting. He will be consulting with Arlan Kertz to insure that it meets whatever is necessary to comply with IRS rules covering a non-profit organization.

PrintScreen
Next issue to include : minutes of Staff meeting and General meeting, Computers on

Message from the Prez column in PrintScreen. It was also suggested that we bring to each meeting a copy of the Microsoft Technet CD that is supplied to User Groups and access it in answering questions during Random Access that cannot be answered by the members of the group. A copy of the solution to the problem would be printed out and given to the person with the problem.

PC Builders SIG
Purchases made for items not donated for our first member built SPAUG computer included a mother board, fan, AMD DX4-100MHz chip,and grounding kid. The cost for these parts totaled approximately $180.00.

The Next Planning meeting is scheduled for September 4. ☒

General Meeting Minutes

Bob Mitchell - July 24, 1996

This was the second meeting of SPAUG at the new EPRI location. All facilities were operating, working with both a laptop PC furnished by Kendric Smith and a desktop PC furnished by Lamont Shadowens. There were 24 regular members in attendance plus 7 guests. Preprinted name tags were supplied to all members and guests. This means of allowing members to know each others names was one of the suggestions that appeared on a number of replies to the questionnaire sent out to the members.

All present were reminded of the importance Random Access particularly to those individuals asking questions. It was suggested that we will strive to give proper attention to all questions with the understanding that there will be times when it will be more appropriate to provide the answers to some more involved problems on a one-on-one basis at the break or the conclusion of the meeting.

Robert Mitchell presented demonstrations on three of the applications on the disk-of-the month (DOM) that was being offered at the meeting. Brian Christopher provided a convenient one-sheet in PrintScreen that fully described the function of each individual application on the DOM.

A briefing on some of the basics of the Internet was offered by Bob Mitchell for those members who are not yet familiar with it. This was followed by a demo covering one content provider, America On Line (AOL). Several areas of AOL were accessed in order to provide members with an idea of the information and service available from a typical content provider without even accessing the Internet.

Kendric Smith took it one step further by demonstrating accessing the Internet in general and concentrating on the SPAUG Web page in particular.

Following the break, Jim Dinkey covered some of the details on our newly organized PC Builder's SIG and established the first meeting date for July 31 at the residence of Jim Bailey.

The raffle was held with prizes going to Jim Dinkey (Lotus Word Pro), Robert Mitchell (Name it) and Lamont Shadowens).

The next Planning meeting will be held July 31st at the residence of Beverly Altman. It is opened to all officers and other members who are interested in providing input to SPAUG planning. The next general meeting will be held on the last Wednesday, August 28, 7:30 at this same EPRI location. All members are encouraged to bring guests.

The meeting ended at approximately 9:35. ✉

Supper with SPAUG
6 PM
before the
General Meeting
-for details-
call Bob Mitchell
(415)368-9530

Welcome
to New Member
Leon Lowery

Thank you
to Renewing Members
Lamont Shadowens
Bev & Dave Altman
Frank Campbell

Hardware SIG

Jim Dinkey

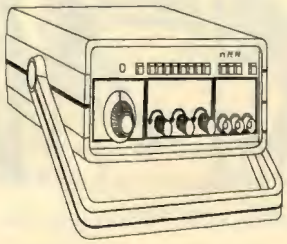
Build Your Own Computer SIG Reaches First Goal!!

Fifteen students attended the last SIG meeting wherein the structure of the motherboard was reviewed in depth per the outline that was previously sent to the students.

In addition to covering the outline, the class experienced a 32 minute video on Electrostatic Discharge Protection (ESD) and gained a new appreciation of how to handle sensitive modern electronic components.

The next class will be at 7:30 p.m.Wednesday August 14 at the home of Jim Bailey, 804 Los Robles Ave. Palo Alto. Precise directions are found elsewhere in the newsletter.

The homework assignment is to:



a. Complete and hand in your configuration of the motherboard (it is now what we ordered).

b. Set forth the steps you would use to activate the board and the electronics required.

Plan to hand these in and be sure to keep a copy for yourself of both of the above items.

We will do the following:

1. Assure that the consensus of the class' determination of the jumper positions is correct.

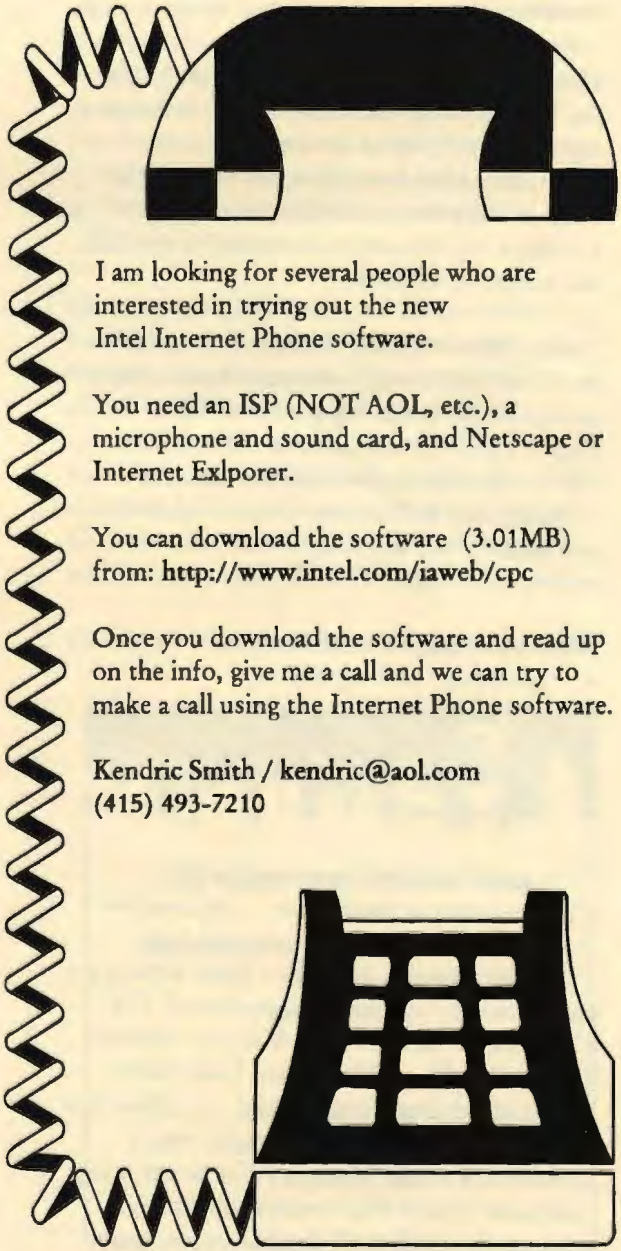
2. Assemble the components that are necessary for minimum operation. And no, I'm not going to tell you what that is without the homework being handed in.

3. Check out the components using appropriate diagnostics both on-board and external.

4. If time permits and if it makes sense, some signals on the board may be viewed with an oscilloscope.

5. A detailed description of the function and structure of a video card will be offered.

The LAST class (#3) will be Wednesday September 4 at Jim Bailey's. ✉



I am looking for several people who are interested in trying out the new Intel Internet Phone software.

You need an ISP (NOT AOL, etc.), a microphone and sound card, and Netscape or Internet Exlporer.

You can download the software (3.01MB) from: **http://www.intel.com/iaweb/cpc**

Once you download the software and read up on the info, give me a call and we can try to make a call using the Internet Phone software.

Kendric Smith / kendric@aol.com
(415) 493-7210

The INTERNET And Service Providers

Part one (Material excerpted from Microsoft Mindshare)

condensed by Bob Mitchell

What is the Internet?: It is a massive collection of computer networks that connect millions of computers, people, software programs, databases, and files. The parts and players are spread around the world and interact continuously.

History: The Internet was created in 1973 by the U. S. Defense Advanced Research Projects Agency (DARPA) to ensure that their communications systems would continue to work in the event of war. For most of its existence the Internet was primarily a research and academic network.

Today: More recently, commercial enterprises and a vast number of consumers have come to recognize the Internet's potential. Today people and businesses around the world can use the Internet to retrieve information, communicate and conduct business globally, and access a vast array of services and resources on-line.

What will I find on the Internet?:

- Electronic mail capabilities
- Thousands of Internet discussion groups
- Vast libraries
- Files transferable to user computers
- Bulletin Boards

Where is all this information stored?
The resources of the Internet – information and services – are provided through host computers, known as servers. These servers are maintained by the various branches of U.S. Government including the Military, Network Service Providers, Educational Institutions, Commercial Organizations plus any other type of organization that chooses to become a contributor to the Internet. The server is the computer system that contains information such as electronic mail, database information, or text files. Once you connect to the Internet, you interact with other computers using a client/server model.

How can I connect to the Internet?
This is done using a new kind of utility company known as an Internet Service Provider (ISP). This can be a small local operation (Media City) or one of the content providers such as Microsoft Network, America On Line (AOL), Compuserve or Prodigy, or something in between. They provide access to the Internet with a local phone number, precluding long distance charges for that connection to the Internet.

What do the content providers offer that I cannot get from a local ISP?
A wide assortment of commercial quality information, which the on-line service obtains from commercial servers such as Newspapers and Magazine reprints, Personal financial information, Travel, Consumer Advice, Sports Updates and background information and General Reference

Access to facilities that allow you to send and receive e-mail via the Internet

Such services as WWW, Usenet news, FTP,Telnet, and Gopher (explained later)

How do I locate a resource on the Internet?
Every resource on the Internet has its own location identifier or Universal Resource

Locator (URL), an Internet address. This helps users identify the source of any information on the Internet. When you know the URL, you can key it in for immediate access The first part of the URL indicates the access method or protocol used by that server. For instance, all Web sites would have a URL that begins with "http", since that is the protocol for accessing the Web. The second part of the URL is the computer's domain name, which is described below. For example, http://www.msn.com is the locator for the Web page about The Microsoft Network on-line service. The WWW indicates this is a Web home page, msn is the name selected by Microsoft for this site, the .com indicates this is in the commercial domain of the Internet.

What if I don't know the URL address?
There are applications know as Browsers (e.g.: Mosaic, Netscape Navigator, Microsoft Internet Explorer) which allow you to browse through directories narrowing your search as you move through various generations of sub-directories.

There is also a non-graphical text oriented Browser entitled Gopher which enables you to browse for information without having to know where the material is specifically located, and then helps send the material to you, There are also related programs known as Veronica (searches for documents) and Jughead (searches for directory titles only),

What is the World Wide Web?
The World Wide Web is the multimedia part of the Internet. It is currently the fastest growing part of the network. WWW content displays as a page and, unlike other Internet sites, text is formatted in various fonts, styles, colors and sizes. Pages may also contain pictures, sounds, and movies. Hypertext Transfer Protocol (HTTP) is the standard language that allows Web clients and servers to communicate. Sometimes WWW servers are called HTTP servers. HTTP is used as a part of the path name for Web sites.

What are Web Sites ?
Companies and organizations establish Web sites by providing Web pages to sell their products, or simply to tell you about themselves. Individuals can also develop their own personal Web pages. The initial screen you see when you access a Web site is commonly referred to as a home page.

How can I obtain data files or copies of software programs from the Internet?
Sometimes browsing for information is not enough; you may want to obtain copies of software programs or data files for your own use and manipulation. FTP is a method of transferring files from one computer to another over phone lines. You can transfer many different types of files to your computer. For example, you may want the latest upgrade for a particular software product, or you might find your favorite movie star's photograph. This feature allows access to information more quickly than sending disks and hard copy materials through regular, or even express, mail.

There are probably millions of files available via FTP on the Internet. The search tool Archie, a client program, helps you find files stored on FTP sites using keywords that appear in the file names. You enter likely keywords and Archie searches its database for matches. Archie then sends you a list with full file names and the address information you need to retrieve the file via FTP.

Continued in the September PrintScreen

The Electronic PrintScreen
available at
http://www.mediacity.com/~spaug

sponsored by

MediaCity
526 Bryant Street
Palo Alto, CA 94301
(415) 321-6800

HP Scanners

http://www.dmo.hp.com/peripherals/scanners/sj4s.html

ScanJet 4s Personal Desktop Scanner
Updated June 7, 1996

Product Summary

HP's personal desktop scanner for filing and sharing documents electronically.

HP's ScanJet 4s personal desktop scanner is easy to use, affordable, and small enough to fit between your keyboard and monitor. It's the perfect way to remove the barrier between the paper in your hands and your computer.

With the HP ScanJet 4s, you can scan a business card, magazine article, report, memo, receipt, and much more, and, with one click of your mouse, electronically file it, fax it, mail it, edit it, or copy it. And it's even simpler to use than a copier or fax machine-just insert your document into the sheetfeeder and it instantly appears on your screen.

The HP ScanJet 4s is a complete, low-priced solution that includes automatic links to e-mail and e-fax, plus integrated OCR software that lets you place text directly into your documents to save retyping. It lets you make copies right at your desk using your printer. And you can even integrate text and photos into documents.

The HP ScanJet 4s: the easiest way to share the information with people, when and where they need it.

Features

Scans a typical text page in less than 10 seconds.

Scans documents as small as business cards and newspaper articles as large as 8.5" x 30".

Plugs into any available serial port-no need to install a card into your computer.

Makes document sharing easy with automated links to e-mail and e-fax.

Includes Visioneer PaperPort V. 3.0 with Auto-Launch links to over 60 popular applications with a single mouse click.

Integrated OCR lets you scan directly into your word processor to avoid retyping.

Has tools for filling in forms, editing, and adding electronic "sticky notes" to documents.

Turns on automatically when document is inserted into sheet feeder, and turns off when scanning is completed.

400 dpi enhanced resolution and 200 dpi optical for clear, easy-to-read documents.

Supports Windows and Macintosh operating systems.

ScanJet 4p Scanner

http://www.dmo.hp.com/peripherals/scanners/sj4p.html

Product Summary

Scan anything you want ... quickly and easily

The HP ScanJet 4p color/grayscale scanner is an affordable color scanning solution that's easy to use. It scans color and grayscale images and text in a time-saving single pass. And it comes with user-friendly software that lets you start scanning in just minutes, right

from your application--even if you've never used a scanner before.

The HP ScanJet 4p is ideal for creating new documents, converting and storing documents in electronic file formats, and capturing images and pictures to create high-quality presentations, newsletters and other communications. It is ideal for word processing, desktop publishing, desktop presentation, OCR, e-mail, e-fax and copying.

Best of all, the HP ScanJet 4p is backed by HP's rock-solid reputation for quality and reliability, so you know it's built to last. Plus it comes with a one year warranty and a responsive service and support plan to keep you up and running.

The HP ScanJet 4p scanner: easy, high-quality color and grayscale scanning makes this your complete office solution at an affordable price.

Features

A complete, affordable solution to all your color and grayscale image and text scanning needs. All in the box from HP.

1200-dpi enhanced resolution and 300-dpi optical resolution ensure the best results with your office printer.

Single-pass scanning provides fast color and grayscale operation.

HP PictureScan automatically scans images into your documents.

Capture photographs in 256 levels of grays and over 16.7 million colors.

Automated features and simplified user interface make scanning quick and easy for anyone, increasing productivity.

Output is automatically optimized for a broad range of printers and output devices.

HP AccuPage technology and integrated OCR software make it easy to scan text.

TWAIN/OLE support lets you scan pictures, logos, drawings and other images directly into your application.

HP ScanJet Copy utility lets you make high-quality color and black-and-white copies at your desk with your printer.

Visioneer PaperPort software helps you quickly find and organize scanned images and electronic documents visually instead of by file name, and provides automated links to a variety of applications, such as e-mail, e-fax and word processing.

Scans different types of media, including simple photographs, office documents, books and magazines.

Scans pages up to 8.5 x 14 inches.

Supports Windows and above, Windows 95 and Macintosh operating system. Optional 50-page automatic document feeder for hands-free scanning.

ScanJet 4c Scanner

http://www.dmo.hp.com/peripherals/scanners/sj4c.html

HP's ScanJet 4c color/grayscale scanner makes it easy to get high-quality images and text into your office communications in a single, time-saving exposure. And its user-friendly software lets you start scanning in just minutes, right from your application--even if you've never used a scanner before.

The HP ScanJet 4c is perfect for capturing high-resolution color and monochrome images and pictures to create presentations, reports, promotional materials, and more. It comes with image-editing software that gives you total control over your image. And it's compatible with most popular Windows and Macintosh office applications.

You can even use the HP ScanJet 4c with your printer to make color and/or black-and-white copies right at your desk. It also includes special software that simplifies document

storage and retrieval, and makes it easy to distribute documents via automated links to e-mail and e-fax.

The HP ScanJet 4c: high-quality color and grayscale scanning that's fast, easy to use, and reliable.

Features

High-quality black-and-white, grayscale, and color scanning.

2400 dpi enhanced resolution and 600 dpi optical for high-quality images and line art.

Greater shadow detail with 30-bit color, 10-bit grayscale internal scanning.

Single-pass, single-exposure scanning for fast, superior results.

Includes easy-to-use HP DeskScan II scanning software with automatic settings, and Caere OmniPage Limited Edition OCR with HP AccuPage technology.

Comes with Corel PHOTO-PAINT 5 (Windows) or Adobe Photoshop LE (Macintosh) image-editing software.

Includes award-winning Visioneer PaperPort software for easye-mailing, filing, and faxing.

Compatible with Windows 3.1, Windows for Workgroups, Windows 95, and Macintosh System 7.0 and above.

TWAIN/OLE support lets you scan directly into your applications.

Scans up to 50 pages at a time with optional automatic document feeder, and scans transparent media, such as 35 mm slides, with optional transparency adapter.

ScanJet 4Si Network Scanner

http://www.dmo.hp.com/peripherals/scanners/sj4si.html

Product Summary

HP's network scanner for distributing, sharing, and filing documents electronically

The HP ScanJet 4Si is a grayscale network scanner that quickly converts printed information to electronic format for distribution, sharing, and filing. The industry's first true network scanner, the HP ScanJet 4Si attaches directly to Novell NetWare LANs via Ethernet or Token Ring.

The HP ScanJet 4Si offers seamless integration with today's most popular e-mail, groupware, word-processing, and PC-fax applications. Documents can even be scanned directly to a networked printer to make copies.

An intuitive, front-mounted control panel and user-friendly Visioneer PaperPort software enable workgroup members to use the HP ScanJet 4Si with virtually no training. A 50-page automatic document feeder and fast scanning provide uninterrupted 15-ppm productivity. And included server software makes set-up and maintenance easy.

The HP ScanJet 4Si: the network tool that helps workgroups gather and distribute information more efficiently, resolve issues faster, and make better decisions.

Features

Direct Novell NetWare LAN connectivity via Ethernet or Token Ring--no need for dedicated PC.

Front control panel for fast and easy destination and setting selection.

Integrated, highly reliable 50-page automatic document feeder supports letter, legal, and A4 formats.

Novell certification, SNMP- and MIB-II compliance, Open-View manageability, internal buffering, and Group 4 compression for easy network integration and control.

Complete client and server software solution includes 20-seat license for Visioneer PaperPort V. 3.0 with integrated OCR and network administrative utilities.

Client "traffic light" helps users monitor status, and server software allows easy setup and maintenance.

1200 dpi enhanced resolution, 300 dpi optical, and 8-bit (256) grayscale scanning for superior text and image scanning.

Software compatible with Microsoft Windows 3.1 and above, Windows for Workgroups 3.11, and Windows 95. ☒

"His phone is busy, his fax is busy and his modem is busy. I'll just walk over and talk to him."

TWAIN White Paper

http://www.twain.org

Originally Published March 17, 1992
Last Revised: March 6, 1996

TWAIN : Linking applications and images

What TWAIN Is

TWAIN defines a standard software protocol and application programming interface (API) for communication between software applications and image acquisition devices.

History: The Issues that started TWAIN
In desktop publishing's early days, most publications contained only text and simple black-and-white line drawings that were output to black-and-white laser printers. In recent years, however, computer hardware and software has become much more sophisticated. Both business professionals and graphic artists can now create and output complex, full-color publications. This near-commercial-quality work may include black-and-white, greyscale, and color images acquired from desktop and hand-held scanners, or from still video, digital cameras or image capture boards. This growth in technology means vendors are faced with a challenge: to supply customers with hardware seamlessly for an efficient, easy-to-use computing process. Unfortunately, image acquisition remained a difficult process. To acquire and place an image in your publication, you must leave the application in which you are working. Then you must locate and open a hardware driver, set the device options, acquire the image, save it to disk, close the hardware driver, return to the application, then locate and read in the image file from disk. The process was time-consuming and tedious, and not how business professionals, designers, or publishers wanted to work, particularly with the increasing need for on-demand integration of images acquired in real time.

History: How TWAIN Provided a Solution
When the image-acquisition issue surfaced, hardware and software developers began

defining their own image acquisition interfaces. This was a step in the right direction, but it soon became apparent that high numbers of proprietary interfaces were not the ultimate solution. It's inefficient to require a software developer to write a driver for each device they need to support. Conversely, it doesn't make sense to ask a hardware vendor to write a different driver to interface with each software application. Most importantly, it isn't acceptable that users must deal with many unique application/device driver files.

Users need a painless way to get image data into their applications. Software developers need compatibility with the widest range of output devices without writing and maintaining multiple device drivers. Hardware developers need compatibility with the greatest number of applications without application-dependent coding.

The solution to this situation is an open industry interface that directly acquires image data from external sources while within an application. With this, each software developer supports a standard data acquisition manager and each hardware vendor writes one driver for their device. Hardware vendors will benefit because they need only provide one standard driver for their device, which can then be used by all software applications supporting the standard data acquisition interface. Software vendors will be freedfrom writing and supporting device drivers, or from soliciting support for their own proprietary interface. Software vendors will also benefit because one single interface will support those vendors writing these device drivers. Users will benefit because they can place a smaller set of drivers at the operating system level and take advantage of seamless images acquisition from a large number of applications.

History : Forming the TWAIN consortium
In early 1990, the formation of the Macintosh Scanner Roundtable group heightened the imaging industry's awareness of the need for an open interface. While participation in the roundtable was high, it was difficult to resolve issues and progress was slow. At one of the group's last meetings in 1990, it was suggested that a smaller set of industry leaders form a consortium and create a specification for review, revision, and ultimate adoption by the imaging industry. The TWAIN Working Group was formed with representatives from Aldus, Caere, Eastman Kodak, Hewlett-Packard, and Logitech. The Working Group's primary goal was promoting imaging products through developing an easy-to-use image acquisition interface and educating users about it. A key requirement of participation was that members be willing to represent a broader interest than that of their own company. The number of participants was kept low so the specification could be written quickly, while representation from a wide spectrum of application developers (desktop communications and OCR) and hardware vendors (hand-held, desktop, and high-end color imaging devices) was maintained. The result was that working group members represent diversity in the industry, and bring in-depth imaging experience to both hardware and software development, and marketing fields.

At the TWAIN Working Group's first meetings, engineers faced the huge task of reviewing specifications and resolving outstanding requirements issues. Most Working Group companies had written their own interface for direct image acquisition, and these were considered, as well as more than two dozen specifications provided by other companies. No single specification or protocol, including those from operating system vendors, provided the completeness, richness of functionality, and ease of implementation that was required. Eventually, a composite of Silicon Beach/Adobe Plug-ins, an internal Aldus protocol, an HP protocol under development and Logitech's SAPI was used as the basis for TWAIN.

TWAIN Working Group engineers participated in monthly workshops to define the specification. A separate Marketing Working Group met to discuss publishing a toolkit, supporting the interface, and other

(Continued on page 15)

Microsoft Windows 95

Microsoft TechNet

Continued from July PrintScreen

6. When you see the Boot Manager menu, choose to boot to MS-DOS and run FDisk.
7. Make the MS-DOS partition (C) your active partition.
8. Quit FDisk and then restart your computer.

To reinstall Boot Manager after you install Windows 95:
1. From the Windows 95 Start menu, click Run and then type FDISK.
2. Choose the option, Set Active Partition.
3. Enter the number of the Boot Manager Partition. This partition is the 1MB Non-DOS partition usually placed at the top or bottom.
4. Quit FDISK, and restart your computer as instructed. You can now start OS/2 at any time and change labels of partitions in Boot Manager through the OS/2 FDISK program.

[Q: How do I make copies of my original disks to install from?]

The DMF disk format is not compatible with the Diskcopy or Copy commands and increases the amount of data stored on a standard 1.44/3.5 in. diskette. There is no way to make a direct copy of these diskettes.

[Q: Can I make floppy disk images from the CD?]

The CD-ROM contains cabinet files (*.cab) files that are 2 MB each and will not copy onto floppy disks.

[Q: Setup keeps hanging during the information-gathering section, how do I bypass the problem?]

Occasionally Setup can stop while detecting a device on the computer.
1. Turn the computer off for 10 seconds, and then turn it back on.
2. Rerun Setup to bypass the problem by choosing Safe Recovery.
3. Setup will continue bypassing the detection problem it encountered on the previous attempt.
4. Continue to power off the computer, and rerun Setup as needed until the Windows 95 setup process is compete.

NOTE: If you have already run safe recovery several times, you can manually select the hardware in your system to minimize the chance of stopping, since Setup will detect only the hardware you select.

[Q: Should I set up a separate partition to install Windows 95?]

As with any software package, it is always a good idea to have a backup before installing it. Windows 95 has been tested on thousands of computers on many system configurations with a very high success rate, so we are confident that you will have few problems, if any, installing Windows 95.

An uninstall feature can be enabled during Setup. Uninstall copies your previous MS-DOS and Windows 3.x versions and keeps a log, so that Windows 95 can be removed and the previous files returned to where they were before Windows 95 was installed.

Windows 95 does not require its own partition, however, it can be installed if you want to dual boot between your current Windows 3.x and Windows 95.

[Q: Should I install into my existing Windows directory or a different directory?]

Preserving your existing installation of Windows and upgrading on top of it is highly recommended as Setup is using your existing configuration files (Config.sys, Autoexec.bat, System.ini, Win.ini, Protocol.ini) for more accurate detection and installation. The advantage to installing in your existing Windows directory is that the previous settings and applications are used in the new installation.

The advantage to installing Windows 95 into a different directory is that it preserves your

previous DOS/Windows configuration, allowing you to dual boot between versions. The disadvantage is that all Windows applications and possibly drivers for hardware peripherals (sound cards, tape drives, etc.) must be re-installed to put the proper support files in place as well as the application settings in the .ini files and/or the registry.

[Q: How do I set up Windows 95 into a separate subdirectory?]

During Setup, Windows 95 you are prompted to provide a directory to install Windows 95 into.

To install Windows 95 into a new directory:
1. Click the Other Directory option, and then click Next.
2. Enter the new directory. For example, C:\Win95.

[Q: What files do I backup to preserve Windows 95 settings?]

You can use the Windows 95 Backup utility to backup your system and all user and software specific preferences. In order to do this, use the Full System Backup File set which is described on the second screen that comes up when you run Backup.

NOTE: After installing Windows 95 into another directory, all programs (and possibly all hardware-peripheral drivers) must be re-installed.

[Q: I have installed Windows 95 into different directory than Windows 3.x or Windows for Workgroups 3.1x. How do I set up to dual boot between them?]

When installing Windows 95 into a different directory, dual booting is enabled by default. Dual boot is only available if the existing version of MS-DOS is version 5.0 or greater. If this criteria is met, dual booting to a previous version of MS-DOS is accomplished by:
1. Pressing the F8 key when you see the prompt, "Starting Windows 95" at startup.
2. From the menu select the option, Previous Version of MS-DOS.

[Q: What files does Windows 95 modify during Setup?]

Windows 95 is a new operating system, and affects many files on the system.

[Q: Can I run the Windows 95 Setup program from MS-DOS? Do I lose any functionality?]

If you have a running installation of Windows 3.x or Windows for Workgroups 3.x1, it is strongly recommended that you run Setup from your existing version of Windows. This provides the safest and smoothest installation. If you do run Setup from MS-DOS, and it detects Windows on the computer, it will recommend quitting Setup and rerunning it from Windows. If you do run Setup from MS-DOS, Setup may run slower (especially if installing from floppy disks).

[Q: Can I set up Windows 95 from a network?]

Yes. There are two ways to set up Windows 95 from a network location:
-- Create a Windows 95 flat directory by either using the COPY command for a CD-ROM, or by using the Extract command for floppy disks. Connect to the shared directory, run Setup, and then choose a directory on your computer to set up to.
-- Go to Nettools directory (CD-ROM only) to use the Netsetup Utility.

[Q: Setup stops after the first reboot, why won't it restart?]

There are several reasons, ranging from video problems to disk-access issues. Here are some steps to troubleshoot a no-start situation:

1. Restart Windows 95, and then press F8 when you see the message "Starting Windows 95...".
2. Choose Safe Mode from the Startup menu. If Windows 95 starts, change the video driver to the standard VGA driver by following these steps:

1. Click the Start button, point to Settings, and

then click Control Panel.
2. Double-click the Display icon.
3. Click the Settings tab, and then click Change Display Type.
4. Click Change in the Adapter Type section, and then click Show Compatible Devices.
5. Click Standard Display Types, and then double-click Standard Display Adapter (VGA). Click OK.
6. Restart Windows 95.

If Windows 95 still stops during startup:

1. Rename Config.sys and Autoexec.bat and/or
2. Go to Control Panel, and then double-click the System icon.
3. Click the Performance tab, and then click the File System button.
4. Select the Troubleshooting tab.
5. Check all of the available boxes, and then click OK in all dialog boxes and reboot.

[Q: I was running Setup for the first time and it stopped during hardware detection. What do I do now?]

If your computer stops during the hardware-detection phase of Setup, turn off the power on your system, wait 10 seconds, and then turn the power back on. Do not press CTRL-ALT-DEL. When your system restarts, restart Windows using Safe Recovery, which will skip the portion of detection that caused the problem. If your system stops again, it will be in a different detection module. Perform these steps as many times as necessary to allow your system to complete detection.

[Q: Setup didn't detect my network card, how do I set up my network card?]

To add a network adapter:
>From Control Panel, double click Add New Hardware, and let Windows try to detect the network card. If it does not, you can manually select it as follows:
1. From Control Panel, double click the Network icon.
2. Click Add, and then click Adapter.
3. Find your make and model from the list of manufacturers.
4. Change the displayed settings to match your card's configuration.
--If it is not a listed network adapter, check the diskette that came with your adapter. If the driver came with Windows or Lanman (NDIS compatible) diskettes, then select "Have Disk" and point it to the path of the Oemsetup.inf file.
--If there are only Novell ODI drivers available, install the driver in Autoexec.bat using the LSL.com and the <nic_odi>.com (provided by Novell and the NetWare card manufacturer) and then select "Existing ODI Driver" from "(detected net drivers)." For more information on how to install the ODI driver, consult your network card manufacturer.

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issues, including how to inform the industry and public about the interface.

Besides the TWAIN Working Group, more than 175 major imaging hardware and software companies form a group called the "TWAIN Coalition." This larger group reviewed the TWAIN specification and provided feedback prior to its release. The TWAIN Working Group took comments and suggestions from the TWAIN Coalition, examined the costs and benefits of the modifications, and decided which to incorporate into the specification. The Specification is now in it's third revision.

TWAIN Today: Consortium and Coalition Information As of 1995, the TWAIN Working Group is composed of four companies: Hewlett-Packard, Logitech, Documagix and Canon. These companies continue to regularly update and modify the specification, set direction for future TWAIN development, and implement additions to the TWAIN Data Source Manager and tools. In addition, the TWG provides the core answers to questions from the TWAIN community. ☒

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