Computer World News

Multilink Int'l Co. Ltd., a sister concern of Computer World, one of the leading computer organization in Bangladesh Multilink, they are representing world renowned UNISYS Computer and Hewlett Packer Laser Printer. UNISYS has wide range of quality products and backed by three years warranty and services are available from Multilink.

APC Series Model **PSI** 3333

and 43334 Compact Workstations Provide Versatile Performance. Today's high-end and graphical applications require top performing workstations. At the same time, as your enterprise deploys more PCs within networks, you demand economical systems with added-value features. The Unisys APC Models PSI 3333 and PSI 43334 combine affordability with versatile computing performance-plus superb networking and unsurpassed quality.

These workstations are ideal for running the whole range of MS-DOS and Microsoft Windows applications.

As organizations shift from fixed-function terminals to multi-purpose workstations, the APC Models PSI 3333 and PSI 4333 form viable alternatives to traditional terminals.

It's easy to see that the APC Models PSI 3333 and PSI 4333 have everything for today's requirements - and the expandability to meet the needs of tomorrow.

When more and more sophisticated Windows applications require faster processing power, the PSI 4253's 486SX CPU can be supplemented with an Intel OverDrive processor.

Just take your Unisys APC Model PSI 3333 or PSI 4333 out of the box and it's ready to run.

Printer and communications ports, floppy/hard disk controller, VGA graphics, and system memory — they are all built-in. The system's free slots are available for additional addon cards to meet specialized

Compact and Powerful

The heart of PSI 3333 is an Intel 386SX processor running at 33MHz. The heart of the PSI 4253 is an Intel 486SX processor running at 25MHz.

Other significant standard features include: THE DELICE E

 Two asynchronous serial ports (one 9 pin and one 25 pin) and a Centronics compatible bidirectional parallel printer port.

* A separate keyboard port. . Each system is pre-configured with one 1/3 height 3.5 inch 1.44MB floppy disk drive. * In addition to the above. there is one exposed 3.5-inch

5.25-inch peripheral bay to provide further expansion capabilities. The APC

peripheral bay, and one exposed

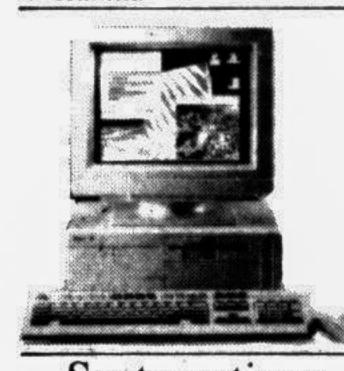
Benefits Like all the products in the Unisys APC Series, the PSI

3333 and PSI 4333 provide ex tra value: * The flexibility of a family of PCs that meets the diverse needs of business and govern-

* Quality design and workmanship ensuring maximum return on your investment.

 Strength of a vendor with vast experience in providing complete information processing solutions.

* A commitment to stan dards that protects your hardware and software investment.



Systematique Computing Ltd (SYSCOM):

Product news on **Dell Computers**

On December 13, 1993 Dell Computer Corporation announced the new family of Pentium processor-based PCs. the Dell OmniPlex 560 and 566. designed for the "Techno-Critical" customer — customers who typically work in missioncritical, corporate environments and require advanced features and system performance.

The OmniPlex systems are based on PCI (Peripheral Component Interconnect) and EISA (Extended Industry Standard Architecture) design and feature the highest level of Intel-based computing power currently available, the Pentium 60 and 66 megahertz (MHz) microprocessors. The OmniPlex family combines advances in

industry standard architecture with Dell's own innovative design, allowing information to travel at great speeds through

corporate several features to provide, advanced levels of performance that will address users' requirements for highend desktop solutions. These

1) Industry-Leading Power Fully optimized, 64-bit processor/memory design. plus PCI local 1/0 technology; EISA Peripheral bus support, and 60 and 66 MHz Pentium processors.

High Performance Data Throughput: Via an integrated PCI Fast SCSI II disk subsystem; SCSI technology allows multiple high-performance Peripherals to be connected to the system. enabling them to share information very quickly.

Accelerated Video and Graphics Performance: Vla and integrated, high resolution PCI video subsystem.

Reliability and Security: Processor thermal shutdown Jeature, easy serviceability with the Dell-designed OptiFrame chassis, Flash memory, embedded diagnostics and password protection features.

Applications ideal for this powerful workstation include software development, financial analysis, computer-aided design and other demanding engineering disciplines, as well as floating-point-intensive applications such as 3-D modelling. For example, a financial institution can take advantage of the OmniPlex's power by using the workstation to pull real-time stock quotes from a large date base while simultaneously compiling the information into a multi-layer financial model.

Unidev Ltd

A VESA Local-bus Architecture PC with Acer ChipUp technology from 486SX-25 to 486DX2-66.

> VESA Local-bus VGA On-board

Since Windows type grapical user interfaces (GUI) have become the standard for the latest generation of operating systems, high performance displays are more important than ever. Acer-Mate 486 series provides you with 10 to 15 times more performance than the traditional Super-VGA, with VESA Localbus VGA available on-board.

ChipUp Means **Investment Protection** Utilising Acer's advanced

technology, the AcerMate 486

its integrated PCI data highway. The OmniPlex systems in-

Product News

can increase processing power by allowing you to upgrade your CPU from 486-25 up to 486DX2-66 (enhancing performance by 300 percent: Intel Icomp Index 486SX/25: 100: 486DX2-66: 297). In todays marketplace, this unique tech nology by Acer is the most in vestment protection you can

Small Footprints

Even before you start computing you will notice the practical AcerMate design concept Adjustable footpads allow you to lay it flat or stand it on its side, saving valuable desk space. In addition, the screwless case makes it easy for you to open the system casing to replace or install adapters or disk drives

With AcerMate you can boost system performance to meet your needs and upgradability is ensured with system memory upgradable from 4MB to 36MB. secondary cache up to 256MB. and video RAM from 512KB to 2MB. And you can keep the data safe because AcerMate includes a full set of security features to prevent unauthorised access

AcerMate brings performance and value to a variety of users. Whether in an office environment or in a home busi ness, the AcerMate line of products ensures you receive a high quality, high performance com puter. Designed with quality components and over 16 years of computer experience. Acer lets you move up to 486 power with a computer designed for today's computing needs — the AcerMate 486 family.

Dolphin Computers Ltd Acer Products in

German Dealer Survey In a recent survey of German

PC dealers conducted by the German biweekly Markt Interm. Acer won first and third place for monitors and PCs, respectively, in 1993.

This is the first time that Acer participated in this survey,

Top Ten PC Suppliers	Monitor Total Result Rank Manufacturer		Monitor Product Quality Rank Manufacturer	
Toshiba				
Peacock	1	Acer	1	Acer
Acer	2	Sanyo	2	Eizo
NEC	3	Miro	3	Sony
Hewiett	* 4	Philips	4	Philips
Packard	5	Eizo	5	NEC
- Sanyo	6	Hitachi	6	Apple
Schneider	7	Sony	7	Miro
ASL (Aquarius)	8	NEC	8	Hitachi
Compag	9	Apple	9	Sanyo
0 IBM	7.68 E.	Average	1	Average

so it was somewhat of a surprise that the respondents overwhelmingly voted Acer as the top monitor supplier. The survey covered three hardware categories: monitors.

PCs, and printers. The dealers were asked in a questionnaire to evaluate the sales activities and products of their suppliers. Acer, the largest PC manufacturer in Taiwan, emerged as the "shooting star of the year", as Markt Interm put it, in the overall survey of monitor suppliers. This means Acer beat out big players like Sony. Philips, and NEC for the honour. Acer achieved top positions for product quality, advertising and sales support, field service and hotline service. The comment of the Hamburge dealers "everything is nearly perfect". certainly hits the nail on the head.

Acer Germany offers the complete Acer product line to satisfy the needs of its customers. And now due to the start of Uniload operations in July. Acer Germany is able to operate with even more flexibility to meet various configuration requirements. A 48 hour processing time from order entry to shipment is guaranteed beginning in 1994. With the advantages of flexibility and shortened response time, it places Acer in an even more competitive position for future growth in the German PC market.

Oliver Abrens, ACG IBCS-PRIMAX Software Ltd **Interactive Multimedia** Information Server From Oracle

Anticipating yet another "technology wave." ORACLE Corporation, the largest Relational Data Base Vendor has introduced a new product that will receive and send multimedia mail messages over enterprise networks.

With "ORACLE Office"

Oracle wants to be a data warehouse where users on different computers can access information. With "ORACLE Office", users can use a single messaging system that runs on PCs, database servers and host based systems. For example, if you are on a PC, you can send an electronic mail message with video to another PC.

The New product is part of ORACLE's recent announcement with US west of the interactive multimedia information server, a product de-

signed to serve as the information management hub on the so-called Information Highway being pushed by US Vice-

President Al Gore. The Server has the capacity to support public databases that include more than one million users and to manage millions of E-mail messages.

PraDeshta Limited Product News BLACK BOX ASD-4 (TK. 20,000 Retail)

line that you would like to share with a Fax machine, a Data Modem (for e-mail!) and of course your own telephone set?

DATA MODEM call.

Also, this box will act as a regulator for your various devices, and prevent you from disturbing another call in progress. For example, if someone in your office or home is using a data modemto do electronic mail. then you won't be able to disturb them by picking up the same telephoneline, as it won't be the same telephone line! You will just get a busy tone signifying the line is in use. This box supports Automatic Call Switching, Extension Detection. Touch Tone Switching and Open Line Notification. Requires Modular RJ-11 compatible connectors with your telephone equipment.

BLACK BOX MULTISERVERS

same line. Phone 881800. 881500 and ask for PraDeshta's expert consultancy in Data Communication Engineering.

Onirbaan Group

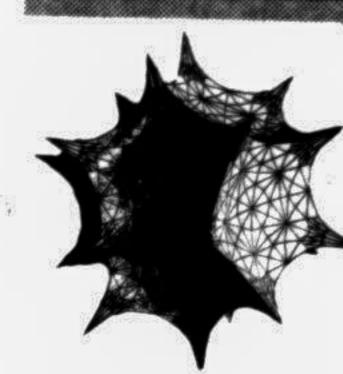
Onirbaan Group has been appointed the distributor of Mathematica software by Wolfram Research Inc. USA. Mathematica is "A system of Doing Mathematics by computers." "This software is used worldwide in science and engineering.

What is Mathematica?

Mathematica is a general software for mathematical and other applications.

Mathematica handles numerical symbolic, and graphical computations, and has a built-in programming language Mathematica can be used as:

A numerical and symbolic calculator where one can type in the questions and Mathematica prints out an swers. A visualization and sound generation system for functions and data. A highlevel programming language in which large and small programmes can be created. A modelling and data analy-



sis environment. A system for representing knowledge in mathematical and technical fields.

A control language for external programmes and processes. A high-level shell for, text and data manipulation.

Who uses Mathematica?

Researchers, Professors, Scientists, Graduate students, Engineers, Undergraduates, Analysts, High-School stu-

Engineers save time by using single integrated system and avoiding custom programming. Researchers explore new directions by extending the range of calculations they can do. Students concentrate on principles and avoid being overwhelmed by computational details.

External interface

Data input form files and

programs. C Fortran and TeX output, Function calling in external programs (most versions). MathLink high-level external program communication (most versions). File and text manipulation language.

International character sets. Notebook user interface

Interactive documents with text, graphics, sound and math. Hierarchical outlining. Text processing with style sheets, Standard graphics and text format conversion Connectivity to remote compute servers.

Versions of Mathematica Apple Macintosh

Microsoft Windows MIPS MS-DOS NeXT CONVEX Silicon Graphics

Mathematica is a registered trademark and MathLink is a

(C) Wolfram Research Inc.

Microsystems

trademark of Wolfram Research Inc. All other products names mentioned

are trademark of their products

43 of the 50 largest (Fortune 50) companies, 13 of the 15 US departments of the government. All of the 50 largest PhD-granting universities in the US.

Numerical computations

Arbitrary precision numbers. Higher mathematical functions (elliptical,

hyperbolic, etc). Matrix operations (inverse, eigenvalues • etc). Fourier transformation. Function fitting, Integration. Root finding. Differential equations. Minimization and linear programming. Number theoretical functions. Symbolic computations

Algebraic simplification, Polynominal factoring, Symbolic integration, Algebraic equation solving. Symbolic matrix operation, List processing.

Graphics and Sound

Function and data plots. 2D. 3D, contour, and density plots, 3D object visualization. Lighting models, High-level graphics description language, PostScript output, Animated graphics |most versions|. Sampled sound from function and data (some version).

Programming language

Interactive symbolic language, Uniform representation of lists, formulas, graphics, programs, etc. Procedural programming, Function programming. Transformation rule paradigm, Pattern matching of general expressions. Symbolic execution tracing.

A Trio of **Color Monitors**

The Diamond Scan 15-, 17-, and 21-inch color monitors (from \$645) from Mitsubishi Electronics America incorporate 0.28-mm dot-pitch and flatsquare CRTs with Invar masks. Resolutions range from 1024 by 768 pixels (15-inch) to 1600 by 1280 pixels (21-inch) noninterlaced. You can store a series of programmable setup parameters and factory presets in the Diamond Scan monitors' scan-

for Cad

(\$395), a full-featured CAD package from Choice Computing, lets you take advantage of the graphical environment and offers an intuitive interface that makes the programme easy to use. Its construction geometry lets you quickly design and create complex entities. With DXF and HPGL import and export capabilities, the software lets you share drawings with such applications as Word for

New Face on AutoCAD

Tune up Your **Hard Disk**

Optimizer for Windows (\$49.95) defragments the files on your hard disk while the system is idle. The application enables you to consolidate the free space on your hard disk. A layout display shows you all the available space and its location. Disk Optimizer for Windows can handle large-capacity drives using expanded or extended mem-

(\$299.95) from Azeena Technologies integrates painting and animation tools for the Windows environment. The package's onion-skin toll lets you simultaneously see the previous, current, and following frame of an animation for precise alignment of objects between frames. The rub-through tool brings underlying objects to the top screen. Animation Paint Box supports various file formats. including AVI (Audio Video Interleave) Source BYTE

P6 and Beyond

Intel's plans for the next level of processor technology

rounding the first Pentium systems, it's sobering to think that one day in the not-too-distant future we'll be yawning in the face of this chip's performance potential the way we now do with an 8086 or a 286. In fact, the P6 and P7 chips - the follow-on processors to the Pentium, code-named the P5 during its development stages - are well under way. Intel has assigned a team of engineers to each chip, and both teams are working simultaneously on chip

design. Intel is offering few details regarding the next two chips in the x86 lineage. Nevertheless. with history as a guide, astute Intel watchers can piece together a reasonable composite of these next-generation microprocessors and ... some insight into their computational

abilities.

First, the P6's vital statistics will be impressive. The number of transistors in the P6 — which should be introduced sometime in 1994 - should rise to between 4 and 5 million. This compares with the Pentium's already prodigious 3.1 million transistor count and could translate into raw computing power of 200 MIPS (million instructions per second) for PC systems, compared with 112 MIPS for a 66-MHz Pentium system. If the P7 follows the historical timetable, it will be the last generation of the x86, family introduced in this century. The P7, expected to be introduced around 1998, will come equipped with as many as 25 million transistors.

Architecturally speaking, the

With growing transistor to-With the programming model

taking up less than a third of the Pentium's circuitry, Intel has a huge transistor budget to implement performance-enhancing features, such as those used in today's high-performance RISC-based processors.

mance edge over the 486 is largely a result of the implementation of techniques such as superscalar processing, doubling the size of the data bus to 64 bits, and doubling the

chip's internal cache size. To be sure, there are more techniques a available for P6 and P7, which will raise the performance potential even higher. These include:

· Out-of-order execution of instructions, which boosts performance by letting the chip process continuously, rather than requiring it to wait for the results from certain operations before starting others. · Register renaming, which

is a way to transparently increase the size of the register set. (A major handicap of the x86 architecture is its small register set, experts generally agree.)

· Extension of the Pentium's superscalar capabilities beyond its cap of executing two instructions simultaneously.

 Implementation of a system of parallel processing units, each with the power of a virtual 386 CPU, on the chip.

What you probably won't see with the P6 or P7 - at least in their first incarnations - is the incorporation of peripherals such as video and I/o electronics onto the CPU. This is contrary to earlier thinking. In the late 1980s, microprocessor experts predicted that the stateof-the-art processors introduced around the year 2000 would include every PC chip but memory. This level of integration would have encompassed everything from the core-logic chip set and graphics to wireless communications and multime-

Today, that prediction appears misguided. Intel and other vendors, it seems, will continue to focus on packing as much power as they can into their leading-edge processors. Integration is under way, but it's being used to merge older processors and support chips for mobile applications. Using that rule of thumb, we should be seeing peripherals integrated onto the P6 about the time we're speculating on what P7's follow-on will look like - early next century.

Multimedia PC/TV Adapter

(\$595) adapter has input and out-put audio capabilities designed to let you add sound to

Do you have a single phone

Try this experiment, call our telephone number 881800, and ask us about the Black BoxAutomatic Sharing Device. Four Port. You will have just passed through a very smart BLACKBOX, that decides whether you are indeed a FAX, MODEM or plain human calling. Use it to route your calls automatically and without hassle. Your phone will only ring when it is neitherthe FAX nor

Do you have a leased line from the Bangladesh T&T Board ? Do you use it for voice only ? Askus about the BLACK BOK MULTISERVER, a innovative range of products that allow you to replace the BT&TB telephone sets on both ends, with digital multi-plexors. Then send without any problem voice. data, fax transmissions at speeds from 2400 bps to 64 Kbps, as much as the line can handle. You actually gain additional channels from effective use of the same line. The equipment is actually affordable once you calculate the benefits and recovered toll charges that you get from linking your fax, data computers and voice telephone sets all together on the-

With all the hoopla sur-

Pentium offers proof that the x86 programming model is fully matured. In fact, the last chip to contain major improvements to the architecture was the 386. introduced in October 1985.

tals, maintaining x86 compatibility is getting easier for Intel chip designers to handle. In fact, Intel estimates that only about 30 percent of the Pentium's transistors - or a million active elements - are devoted to keeping the current chip compatible with previous members of the x86 family.

The Presenter Plus Sound In fact, the Pentium's perfor-

video presentations without using a sound board. You plug the adapter into your computer system's parallel port. The unit has a fack for a microphone or a standard telephone headset and can play back 16-bit WAVformat sound, included are Asymetrix Compelmultimedia presentation software, a PC-to-TV interface, TV font software. video and audio cables a VGA extension cable, and a power

Automatic Color Monitors

An 8-bit microprocessor automatically controls the picture size, position, brightness, contrast, and color balance of Idek/liyama North America's 21-inch, 1600-by 1200-pixel VisionMaster color monitors (from \$ 2895). You can manually adjust color temperatures for color matching for color printers and other monitors. The Idek monitors meet EPA and European energy-saving requirements and MPR II low-



400-DPI **Plotters**

Xerox Engineering Systems 8770 Series plotters (from \$25,900) incorporate the company's patented Advanced Silicon Imaging to print docume.... with laser-like quality (400 dpi). The plotters have high-voltage integrated circuitry that's etched onto an amorphous silicon wide-format print head and feeds a rectangular nib. The plotters operate with 24-or 36-inch media, including opaque, vellum, and translucent paper and clear and matteback film.

Workstations With Faster Graphics

Two graphics accelerator boards based on the S3-928 chip set provide improved graphics performance for Mobius's Protege workstations (from \$3883). The workstations include 16 MB of RAM, a 240-MB hard drive, a monitor, Unix software, and a CX + or CX+TrueColor VESA Local Bus interface board. The boards have a standard resolution of 1280 by 1024 pixels with 256 colors. The CX+True Color board can also run at 1600 by 1200 pixels in 256 colors.

mode memory. Extra Muscle

TrueCAD for Windows

Windows and CorelDraw. Putting a

Panalcon (\$99) provides an iconbased interface for AutoCAD release 12. From Panacea (Londonderry, NH), the software can take AutoCAD drawing files and covert them to iconic menus. Panalcon supports multiple nested icon menus that can be dynamically resized. By selecting an icon. you can call or execute any AutoCAD function, ADS, or AutoLisp routine.

SoftLogic Solutions' Disk

More Animation

for Windows Animation Paint Box

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