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As in past years, manufacturers will take advantage of the large audience SIGGRAPH draws at its annual conference to introduce their new products. We offer you a chance to preview some of the products you can expect to see in San Francisco.

**Cameras transfer images to film, video**

Oxberry Corporation announces the production of MX-Cine, two animation and special-effects cameras for converting computer graphic images into high-resolution cinematography.

The products interface the Master animation camera and a Matrix film recorder to provide a computer-generated animation recorder. Existing Matrix recorders can be retrofit for the MX-Cine operation.

Oxberry describes the product as the next logical step in its progression of animation stands and optical printers. The fixed pilot-pin transfer shuttle, vital in the production of steady screen images, is common to and transferrable to any Oxberry optical printer.

The MX-Cine, mounted in a vertical rolling cabinet and available in two versions, operates from most computer graphic systems with standard as well as custom interfaces. MX-Cine 1 utilizes the QCR 4/2 with a resolution of 16 million pixels for digital color graphics. This version converts to 4000+ over the wide side of a 35mm cine image.

MX-Cine 2 incorporates the Matrix 3000 analog film recorder with resolving capabilities to 1000 lines and high bandwidth supporting high recording speeds. It also takes a direct video signal.

Oxberry Corporation is located at 180 Broad St., Carlstadt, NJ 07072.

Reader Service No. 20

**Macintosh digitizer unveiled**

GTCO Corporation plans to announce a Macintosh integrated digitizer that plugs directly into the Apple Computer's mouse port and operates without any modification to the operating system or applications software. Macintizer works with MacDraw, MacPaint, and all Macintosh software. It can be used for tracing maps, drawings, or any non-metallic material up to one-half-inch thick.

According to the company, the Macintizer's scanning electromagnetic sensing systems will work through dirt and contamination that would normally clog a mouse, and no preventative maintenance is required. The input device's absolute coordinate mode eliminates the occasional "lift and shift" incurred with a mouse's relative coordinates.

GTCO Corporation can be contacted at 1055 First St., Rockville, MD 20850; (301) 279-9550.

Reader Service No. 21

**Versatec adds to Experts**

Versatec has added an engineering workstation to its CAE/CAD system line. The workstation is designed to compete with personal computers but includes 800 x 1024-pixel resolution, multivindows, dynamic menus, an optical mouse, and an internal Ethernet interface.

The workstation has a 768K-byte main memory; a 1.2M-byte, double-sided, double-density floppy drive; and a 10M-byte Winchester disk drive. It can use Xerox Star office automation software.

All Versatec Expert engineering application modules run on the workstation, including schematic design, logic simulation, design description language, mechanical drafting, and Illustrator documentation graphics.

With the Expert VAX Ethernet interface, the workstation can access VAX programs and data, move Expert files to the VAX for processing, and display VAX applications and results in the workstation's VAX window. Multiple VAX computers can run concurrently on the network.

For more information write Engineering Information Systems, Versatec, 2710 Walsh Ave., Santa Clara, CA 95051.

Reader Service No. 22
Kontron subsystem supports VAX, PDP hosts

The Kontron DEC-IPS is a frame buffer and image processor system that operates as a subsystem for a DEC VAX or PDP host computer and provides the image processing and analysis capabilities of the stand-alone Kontron system.

Up to 16M bytes of image memory is available in the DEC-IPS with 1M-byte video memory boards. Standard pixel depth is eight bits plus one overlay bit. The image format is software configurable so that 256, 512, 1024, 2048, or irregularly sized images can be accommodated.

Communication with the DEC host computers is handled through a 16-bit DMA channel. An alternative configuration allows a three-way connection between the image processor, host computer, and the standard Kontron control processor.

One major feature of the system is its library of image processing software. User programming is possible at various levels from microcoding to assembly level to high-level languages such as Fortran. With the high-level commands users can develop programs by forming specific sequences of commands from the library of instructions.

Options available for the DEC-IPS subsystem include a high-resolution display; real-time video processing such as averaging, subtraction, and recursive filtering; and a selection of mass data storage options.

For more information on the DEC-IPS subsystem, contact Kontron Electronics, 630 Price Ave., Redwood City, CA 94063. Reader Service No. 23

3-D, animation packages enhanced

Robert Bosch Corporation is adding two enhancements to its menu-driven FGS-4000 software capabilities. A smooth-shading editor provides two complex shading models for smoothing the surface of a three-dimensional object. A Gouraud-shading model gives a soft matte finish to the surface of an object, and a Phong-shading model creates a surface with highlights toned to the light source.

The animation editor has been expanded by the addition of a tree-grafting program. Users can dynamically edit an existing animation by adding, deleting, replacing, or changing the priority of objects. Animations can also be merged together to create complex scenes. These

Contact the Video Equipment Division of Robert Bosch Corporation, PO Box 31816, Salt Lake City, UT 84131, for further information. Reader Service No. 24

This photograph was taken on the FGS-4000 from Robert Bosch Corporation.
Western Graphtec’s FP 5201 flatbed plotter.

C-size flatbed plotter introduced

Western Graphtec, Inc., is introducing its C-size flatbed plotter, the FP 5201. This plotter, A2/C size, is capable of handling 17 x 24-inch paper and operates at a speed of 18 ips. It features ten automatically interchangeable pens, allowing users to select from oil- or water-based ballpoint, or fiber tip, ceramic tip, or ink pens.

The FP 5201 features a soft-landing control mechanism to prevent pens from skipping on paper; an automatic pen-capping system to prevent unnecessary pen dryout; and built-in pen speed and pressure control. It is offered with three plug-in interfaces, the RS-232-C, the GPIB-488, and eight-bit parallel versions.

Graphtec Protocol Graphics Language is standard in this plotter, and the Hewlett-Packard Graphics Language is optional.

For further information contact Western Graphtec Inc., 12 Chrysler St., Irvine, CA 92718.

Supermicro and Macintosh graphics combined

The CadMac workstation from Cadmus Computer Systems combines a supermicro workstation with the graphics interface of the Macintosh personal computer.

Designed for OEMs, software developers, and end users, the graphics workstation can be used as a file server for a network of Macintoshes, to develop software for Macintoshes, or as the basis of turnkey applications.

The basic CadMac workstation includes the CadMac graphics subsystem, Motorola 68010 microprocessor, 1M-byte RAM, a 32M-byte streaming tape drive, a 65M-byte hard disk, two asynchronous ports, and a UNIX operating system sublicense and C compiler.

Contact Cadmus Computer Systems at 600 Suffolk St., Lowell, MA 01854.

Reader Service Number 26

The Cadmus Computer Systems’s CadMac workstation
Artist's workstation contains IRIS 2400

Alias Research Corporation is using the IRIS 2400 graphics workstation as the hardware base for a turnkey workstation designed to help corporate communications facilities or graphics houses produce a wide range of computer graphics imagery and output those images to a variety of media.

ALIAS/1 permits the use of techniques such as object modeling, rendering, advanced rendering, ray-tracing, painting, and animation. An automatic business graphics package produces bar, line, and pie charts for presentations.

The system comes with interfaces to an Eikonix digital camera capable of scanning static artwork or photographs in color and 2K x 2K resolution. It also interfaces to a bit pad, stylus, or puck and joystick.

Final output can be sent back to the user station monitor for previewing; to a film recorder for 8000-line, 35mm film; to a video recorder for broadcast-quality RS-170-A video signals or single-frame recording to most VTR/VCR's; or to a print system such as the Scitex or Crosfield. ALIAS/1 automatically formats the output picture for the selected device.

The ALIAS/1 consists of an artist’s workstation and the 2400 containing Alias software. The 2400 interactive graphics system is a 32-bit, Multibus-based super-microcomputer, operating under the UNIX operating system and using the Motorola 68010 microprocessor. A designer operates the system by constructing natural “sentences” made up of icons from the menus and objects picked off the screen. Little or no use of the keyboard is required.

The hardware component of the ALIAS/1 can include an optional Ridge 32 dedicated CPU. The additional CPU permits higher levels of sophisticated rendering techniques. Based on Reduced Instruction Set Computer architecture, the Ridge puts VAX 11/780 computer power into a deskside computer.

Alias Research Corporation is located at 111 Queen St. East, 5th Floor, Toronto, Ontario MSC 1S2, Canada.

Reader Service No. 27

Tektronix adds to color display components

Tektronix is expanding a series of color display components based on its proprietary liquid crystal shutter, color display technology to include five- and nine-inch shutters. Like the seven-inch LCS introduced early this year, the new models help design engineers turn a small-sized monochrome CRT display into an equally high-resolution color display.

Applications for the shutters include portable personal computer displays (pictured here); graphics terminals; automatic teller machines; instrument displays such as oscilloscopes, logic and spectrum analyzers; point-of-sale terminals; programmable controller displays; and avionics displays.

Write on letterhead paper to Liquid Crystal Shutter, Tektronix, Inc., PO Box 500, M/S 02-100, Beaverton, OR 97077, for further information.

Reader Service No. 28
The Gotcha ND-1800 display frame memory from N.I.S.E., Inc. comes with an IEEE-488 option. This option provides access, read, and write capabilities for the individual pixels in the ND-1800 memory at random or block transfer. Contact N.I.S.E., Inc., at 20010 State Rd., Cerritos, CA 90701.

Reader Service No. 29

VMEbus modules operate with 16, 32-bit processors

Datacube announces its MaxVideo product line of real-time image acquisition, signal processing, storage, and display modules for the VMEbus. The initial members of the line, all of which communicate with one another via the MAXbus, include the DigiMax A/D, D/A converter; Framestore digital video storage; VFIR linear signal processor; Snap nonlinear pixel processor; FeatureMax histogram and feature list extractor; and MAX-SP filter. The Framestore and signal processing modules can be cascaded for added pixel depth and processing power. Framestore has three $384 \times 512$, 8-bit framstores on board. The VFIR brings signal-processing power of up to 144 million arithmetic operations per second to the VMEbus. The company is located at 4 Dearborn Rd., Peabody, MA 01960.

Reader Service No. 30

Terminal displays 4096 color levels

Comtec DS301B from Daikin Industries Ltd. is a raster graphics display terminal for productivity enhancement in sophisticated design and display applications. Six internal microprocessors give the terminal x-axis, 10-bit hidden-surface removal; a maximum of 4096 levels of smooth color shading, a 3-D cursor, 64 levels of depth cueing, and three patterns of translucency. Daikin's US Corporation is located at 910 Bern Ct., Suite 100, San Jose, CA 95112.

Reader Service No. 31