SIGGRAPH 87 plans varied program

"The place to see the most advanced work being done in computer graphics is SIGGRAPH," says industry consultant Carl Machover, who will be a guest speaker at the SIGGRAPH 87 press briefing. "The technology presented at the conference is the basis for the products you'll see in the near future."

SIGGRAPH 87, the 14th Annual Conference on Computer Graphics and Interactive Techniques, is sponsored by the Association for Computing Machinery's Special Interest Group on Computer Graphics in cooperation with the Computer Society of the IEEE's Technical Committee on Computer Graphics. The conference will be held July 27-31, 1987, in Anaheim, California.

One of the events at SIGGRAPH that is generating a lot of interest is James Blinn's course on the making of "The Mechanical Universe." Blinn developed the award-winning video physics class at Caltech. It uses over seven hours of computer animation produced over a four-year period and has been broadcast on PBS as an educational program.

In the SIGGRAPH course, Blinn will describe the techniques of managing a project of this scope. "I basically worked on it seven days a week for four years, with a week off each year for SIGGRAPH," he said.

Over 140 papers were reviewed by the SIGGRAPH 87 technical program committee, and 34 were selected for presentation at the conference.

"There seems to be a new flurry of activity in the areas of dynamics and kinematics," says Technical Program Chair Maureen Stone of Xerox PARC. "We saw a trend toward increased emphasis on realistic motion. People are taking simulation skills into the animation area.

"The computer graphics field is maturing to the point that we were able to accept papers describing how people are integrating algorithms into graphics systems... There's a lot of interest and excitement in special-purpose hardware for graphics."

The 11 sessions for SIGGRAPH 87 are:
- Animation
- Ray Tracing
- Graphics Systems
- Surface Rendering
- Curve and Surface Algorithms
- Volumetric Modeling
- Hardware Algorithms
- Dynamic Constraints
- 2D Algorithms
- Texturing and Shadowing
- Lighting Models

The technical program will be complemented by 13 panel sessions providing an alternative format for presenting the varying views of the panelists on selected areas of computer graphics.

One panel will focus on "Computer Graphics in Fashion." According to experts, some applications are already revolutionizing the production process, and other, more sophisticated, applications are in the developmental stages. The panel covers topics ranging from how computers can be used to cut huge stacks of fabric, to dressing a robot in a skirt that will fit and move properly, says Panel Chair Jane Nisselson of the New York Institute of Technology.

For more information on SIGGRAPH 87, contact the conference management office at 111 East Wacker Dr., #600, Chicago, IL 60601; (312) 644-6610.

Toshiba and Computervision form CAD/CAM partnership

Computervision Corporation has signed an agreement with Toshiba Corporation that will enable both companies to take advantage of the expanding CAD/CAM workstation market in Japan.

The highlights of the agreement include Toshiba's purchase of a minority interest in Computervision's Japanese subsidiary, Computervision Japan Ltd.; Toshiba's assembly of Computervision's CADDStation workstation; the integration of Toshiba's Kanji modifications to the Unix operating system software for the CADDStation family; and product distribution through Toshiba's Japanese distribution network.

Computervision will supply Toshiba with a complete subassembly, including CPU and graphics processing unit for the CADDStation workstation, and Toshiba will be able to assemble CADDStations under license from Computervision. While the Toshiba CADDStations are expected to eventually contain a significant amount of local content, Computervision's CADDS 4X applications software performance specifications running on the Toshiba-assembled workstation will match the US equivalent.

June 1987
Desktop-scanner market poised for growth, new study shows

The introduction of Hewlett-Packard’s ScanJet desktop scanner has prompted the release of “Desktop Scanners: Key to the New World of Image Processing,” a report by Datek Information Services, a CAP International company.

The report points out that while desktop publishing applications are currently the hottest segment of the scanner market, 40 percent of the revenues in the US scanner market will be derived from sales of multifunctional products by the year 1991.

According to the study, HP’s ScanJet may do for scanners what its LaserJet did for the laser printer market—open up the mass market. The US market is described in the report as entering a period of intense growth. It is driven by a new class of equipment, led by the ScanJet, which offers dramatically improved price and performance. What’s more, the development of new applications will spur additional growth as scanners transcend their use in document preparation and computer publishing.

CAP International estimates that the market for desktop scanners will grow from $85 million in 1987 to $540 million by the end of 1991, with placements jumping from 26,000 units this year to 366,000 in 1991. (These estimates include desktop scanners used in commercial publishing as well as corporate applications.) The corporate segment, with its diversified requirements for image processing, is expected to drive overall market growth while creating an arena of intensified competition.

“The key attribute of scanners,” says Charles A. Pesko, Jr., president of CAP International, “is their versatility. With the addition of software they can go far beyond their basic functions as document input devices.” Applications for image scanners currently include publishing, communications, image databases, and CAD.

For more information, contact Datek Information Services, PO Box 68, Newtonville, MA 02160; (617) 893-9130.

TI supports Brown University project

Texas Instruments’ university program is designed to keep professors and students abreast of the company’s technological advances. According to the March issue of FYI, TI’s semiconductor newsletter, this curriculum support, which is offered in the form of instructional devices and materials, has recently resulted in a new graphics workstation developed by a student at Brown University.

As part of an independent study course, Brown graduate student Dean Blackketter designed a high-performance subsystem based on TI’s TMS34061 Video System Controller. Proposed uses of the workstation include image processing, spectral speech analysis, and 3D graphics, all displayed in either monochrome or color images.

Performing these complicated tasks inexpensively, without sapping the strength of the main processor, was a key element in the project. The controller had to be able to display a wide variety of colors, control an array of shades, provide high-resolution displays, operate fast enough to avoid slowing down the main processor with screen updates, and accommodate multiple timing sequences.

The TMS34061 required only the loading of registers with such information as the number of pixels per line, blanking time, and sync-pulse locations to generate addresses and assume a variety of control functions, according to the article. Further, when provided with memory address in the frame buffer, the controller generated the appropriate row and column address values, which were sent to the special TM4161EV4 video RAMs. Video data was then decoded into display memory with continued loading to refresh or repaint screens.

Blackketter was able to create a graphics system whose picture quality was said to be equal to or better than that of an older, more expensive dedicated system. For the future he is envisioning more advancements, which include interfacing a color video camera to the TMS34061 and adding a digital signal processor for additional processor capabilities.

Texas Instruments contributes devices to universities nationwide. For more information, contact Jerry Luecke, University Strategy Manager, PO Box 655012, MS 478, Dallas, TX 75265.

NCGA explains standards in new release


The document provides an introduction and reference for individuals with little technical involvement in the field, according to NCGA. A general overview of the scope and application of standards, proposed standards and specifications are also featured.

Prepared under the direction of NCGA’s corporate advisory board steering committee, the document is priced at $8 for NCGA members, $10 for nonmembers. Interested parties are invited to contact the association’s membership services coordinator at (703) 698-9600.
NCGA 88 calls for papers and presentations


More than 100 conference sessions and 200 exhibitors are expected. Conference Director Lisle R. Anderson, a division manager in technical systems development for Electronic Data Systems, is spearheading a push to offer systems integration demonstrations on the exposition floor.

The list of planned conference areas includes:
- architecture, engineering, and construction
- artificial intelligence
- biomedical applications
- business, management, and technical graphics
- CAD/CAM/CAE/CIM
- electronic publishing
- future hardware directions
- future software directions
- human factors and user interfaces
- industry standards
- legal issues
- mapping
- statistical graphics
- technical and professional education
- video technology
- visual arts and design

Abstracts are due at NCGA by July 15, 1987. The process for submitting abstracts is outlined in an official brochure, which is available from the Education Coordinator, NCGA, 2722 Merrilee Dr., Suite 200, Fairfax, VA 22031; (703) 698-9600.

Growth predicted for holographic products and services

Business volume in all areas of holographic products and services is expected to reach $190-$400 million by 1990, compared with just $23 million two years ago, according to a report published by Technical Insights, Inc., a worldwide intelligence services company.

Detecting concealed weapons, testing for flaws in a nuclear reactor pressure vessel, and viewing and evaluating new designs for automobiles are just a few of the applications cited for holography.

Holography: Exploiting the Leading Edge

Developments describes basic holographic methods and specific industrial, commercial, and research applications. It also provides listings of groups involved in holographic research and development, detailed patent listings, and an introductory bibliography of holographic literature.

The report is available from Technical Insights, Inc., Marketing Director, PO Box 1304, Fort Lee, NJ 07024; (201) 568-4744. The price is $850 ($885 outside North America).

TMS34010 to be examined in seminars

Texas Instruments and its distributors are sponsoring day-long technical seminars on the TMS34010 Graphics System Processor in more than 25 cities in the US and Canada during June and July.

Emphasis will be placed on the 32-bit TMS34010’s architecture, instruction set, typical applications, development tools, and third-party support. Other TMS340 graphics family members, including Multiport Video RAMs, the TMS34061 Video System Controller, and TMS34070 Color Palette, will also be discussed.

For seminar locations, dates, and specific registration information, phone Texas Instruments at (800) 232-3200, ext. 701.

Intelligent copier/printer market is growing

By 1991, placements in the intelligent copier/printer market will be 1.4 million units generating over $10 billion in revenue, reflecting substantial growth from 212,000 units generating $2.19 billion in revenue in 1985.

This market growth is attributed to a combination of elements, says Bob Sherry of CAP International, a market research and consulting firm based in Marshfield, Massachusetts. These elements include product availability, competitive pricing, ease of use, and increased demand from end users.

High growth is expected in the emerging application areas of office information systems and electronic printing and publishing. The demand for graphics is increasing among users, and CAP anticipates a migration from dedicated word processing to the office information systems application area, which combines text and simple business graphics.

Changes announced for NCGA program in August

NCGA's Engineering & Manufacturing 87 has undergone a program and name change. The conference and exposition to be held August 17-20 in the Bayside Exposition Center in Boston, Massachusetts, is now NCGA CAD/CAM 87.

The program focuses on the impact of personal computers and workstations on engineering, manufacturing, and AEC environments. More than 30 tutorial and technical sessions are planned, and vendors will feature CAD/CAM-related hardware, software, and services.

Information is available by calling (800) 225-NCGA or (703) 698-9600.
Copyright lawsuit defendants file for bankruptcy

Autodesk, Inc., creator of AutoCAD, reports that the owners of Softsave Information Services, Inc., the defendants in a Vancouver, British Columbia, copyright infringement lawsuit, have sought protection under Canadian bankruptcy laws. The suit was filed last December by six members of the Software Publishers Association, who were later joined by Autodesk.

The lawsuit charged the Softsave Preview Club and individuals associated with the company with illegally reproducing copies of software products. The club allowed members to “preview” software for 21 days for approximately $10 per disk. At the end of that period, members were “required” to destroy the rented disks. The club had available hundreds of titles of IBM PC, Apple II, and Macintosh software. The disks that were rented from Softsave, however, were copies of original disks, not the originals themselves.

“Autorodesk will continue to support the efforts of the Software Publishers Association in its campaign to protect the rights of software developers,” said Chris Record, the company’s general counsel. “We will also aggressively pursue independent legal action against parties who violate our license agreements by distributing unauthorized copies of Autodesk products.”

“In this case, both the industry and software consumers won,” said SPA Executive Director Ken Wasch. “Softsave was the largest North American software counterfeiting operation we ever encountered. The operation not only robbed the software industry, but also stole from consumers who were led to believe that they were receiving legitimate copies of software.”

Roundtable airs problems between VARs and manufacturers

Manufacturers cannot achieve product loyalty, a solid profit margin, or sales penetration without a knowledgeable VAR force. At the same time, many of these outlets do not know very much about the product and—worse yet—do not want to learn.

These comments were made by Joseph Messemer, chairman of NCGA’s VAR program committee and president of Bartlett Associates, at a roundtable held during Computer Graphics 87 and sponsored by NCGA’s corporate advisory board.

Messemer cited three major failures of manufacturers:

- signing up dealers, VARs, sales representatives, and distributors who do not know the product
- hiring unqualified regional managers to support the distribution network
- overdistribution of the product, which causes street prices to drop and leaves no margin for product support from VARs.

The vendor’s view is that VARs do not want to be trained. “Many VARs are not willing to accept the training that manufacturers are providing,” said Barbara Preissel, a national sales director at Versacad. “A good VAR should be professional and knowledgeable in technical as well as sales aspects of the business.”

Nevertheless, industry analyst Carl Machover predicts a promising future for VARs. “Suppliers are eagerly looking for ways to develop and expand their current distribution channels,” he said. “Penetration in the market is only about 10 percent because people don’t have the skill to do systems integration. VARs provide the complete turnkey systems needed by end users.”

Task force formed to promote PGL

A series of industry meetings is being conducted to encourage perpetuation and improvement of Professional Graphics Language, a graphics command language originally developed by IBM for its PGA board. The meetings are being hosted by Orchid Technology, manufacturer of accelerator and graphics boards, and Catalyst, Inc., creator of a software library for graphics programmers.

“Although IBM has effectively discontinued its PGA board, the language continues to be a dynamic influence in our industry. We thought it was time to get industry representatives together to formulate a plan to perpetuate and upgrade the language for our mutual benefit,” said Randy Roscoe, graphics product manager for Orchid Technology.

The first meeting was held during NCGA’s Computer Graphics 87 in Philadelphia. The second is planned for SIGGRAPH in July.

The task force is steering away from use of the word “standardization.” “The software business is a dynamic, evolving business. Compatibility is the issue. We are not trying to freeze the design stage, but rather help each other enhance the language,” explained Steve Matthews, Catalyst founder.

“Eventually, the use of new PGL-compatible commands will allow software developers to take advantage of extensions to the PGL without having to write drivers for a specific board. One driver will be able to address all of the extensions in a uniform way,” said Roscoe.

For more information about the PGL task force, contact Catalyst, Inc., (512) 282-6223.