



Exposition Guide

acm

The Seventh Annual Conference
on Computer Graphics and Interactive Techniques
July 14-18, 1980, Seattle, Washington

GENERAL INFORMATION

EXHIBITION SCHEDULE (Seattle Center Coliseum)

Tuesday, July 15 12:00 Noon — 6:00 P.M.
Wednesday, July 16 10:00 A.M. — 6:00 P.M.
Thursday, July 17 10:00 A.M. — 6:00 P.M.

VENDOR FORUM (Seattle Center Coliseum)

Wednesday, July 16 10:00 A.M. — 5:00 P.M.
Thursday, July 17 10:00 A.M. — 5:00 P.M.

SPONSORING ORGANIZATION

SIGGRAPH '80 is sponsored by the Association for Computing Machinery — Special Interest Group on Graphics. The Association for Computing Machinery (ACM) exhibit area is booth No. 403.

EXHIBITION MANAGEMENT

Robert T. Kenworthy, Inc., New York, N.Y., SIGGRAPH '80 Management office is located in Seattle Center Coliseum. In attendance are Robert Kenworthy, Henry Cronan, Veronica Sloat.

PRESS ROOM

Exposition Press Room located in Seattle Center Coliseum.

MESSAGE CENTER — A central location where messages can be left for other conference participants.

Seattle Center Coliseum: Hours 7:30 A.M. — 6:00 P.M.
Monday through Friday. Phone: (206) 345-2633

CONFERENCE HEADQUARTERS HOTELS

Olympic Hotel	Park Hilton Hotel
4th & Seneca	6th & Seneca
Seattle, WA 98111	Seattle, WA 98111
Phone: (206) 682-7700	Phone: (206) 464-1980

TRANSPORTATION

Shuttle buses provide *free transportation* to the Seattle Center between the hours of 7:00 A.M. to 11:00 P.M.

Boarding Points: America West Town Motor Hotel, Olympic Hotel

Return Pick Up Points: West of the Coliseum on 1st Avenue

The bus runs occur 15-20 minutes apart depending on demand. Your SIGGRAPH '80 badge permits you to board.

MONORAIL

A highly recommended mode of transportation is Seattle's unique monorail, first used at the World's Fair in 1962. To accommodate this conference, the monorail starts at 7:30 A.M. and will run at 15 minute intervals until midnight. One way fare is 25c.

METRO

Seattle's public transportation system provides excellent service.

The cost is 50c for one zone fare.

On 3rd Avenue board buses going north on lines 1, 2, 3, 4 or 13.

On 4th Avenue board buses going north on lines 19, 24 or 33 -

getting off each time at the Seattle Center.

Downtown Seattle has a FREE BUS ZONE, which pertains to any Metro Bus within the following zone: area bounded on the north by Battery Street, on the east by 6th Avenue, on the south by the King Dome and on the west by the Water front. Thus, a Metro Bus can be used in this zone to take you to the ACM SIGGRAPH Shuttle Bus route, if you do not wish to walk.

AIRPORT TRANSPORTATION

The Hustle Bus departs from the Olympic Hotel and the Washington Plaza Hotel. Call 682-5950 for schedule. Cost \$3.60.

Metro also provides transportation to the airport for 75c.

Traveling south on 4th Avenue take bus No. 174.

SIGGRAPH – THE ORGANIZATION

SIGGRAPH is the Special Interest Group on Computer Graphics of the Association for Computing Machinery (ACM). The 6000+ individuals who belong to the group share an interest in the topics of Man-Machine Interaction, Graphical Representation of Data, Data Structures, Data Base Searching and Retrieval, Computer Aided Design, Graphic Control Systems, Network Design. Computer Art, Computer Animation, Graphic Software and Graphic Hardware. Local Chapters have been formed in Washington, DC, Los Angeles, CA and Syracuse, NY. Annual membership dues include a subscription to "Computer Graphics" the group newsletter, and are \$7.00 for ACM members, \$3.00 for ACM Student Members or \$12.00 for Non-ACM members. Make checks payable to ACM, Inc., P.O. Box 12105, Church Street Station, New York, N.Y. 10249 and include name, mailing address, and a signature identifying the ACM Number or a request for Non-ACM Number or a request for Non-ACM membership under provisions of ACM Constitution By-Law 7, Section 3. Present ACM-SIGGRAPH officers are:

James E. George, Chairman
Norman Badler, Vice-Chairman
Tom DeFanti, Secretary
Sara Bly, Treasurer
Bary W. Pollack, Editor-in-Chief
Robert A. Ellis, Director
Lansing Hatfield, Director
Elaine Sonderegger, Director
Richard L. Phillips, Past Chairman

FROM THE SIGGRAPH '80 GENERAL CHAIRMEN

Production of a conference is like the construction of a gigantic jig-saw puzzle. If one selects the pieces (technical program, tutorials, exposition), locates and orients them (budgets, local arrangements) and is lucky to find enough pieces to see the picture (a great committee) the form begins taking shape. Eventually one develops "contingency" plans against the overturning of the table (foreseen and unforeseen disaster) and solicits advice (coordination) in the hope that control can be established. Publicity is telling the world how great things are going to be and being reminded of the errors made by others. Certainly one can get some satisfaction from putting together the final pieces (putting some personal touches to the result). However, the results of SIGGRAPH '80 will be longer lasting than the construction of a puzzle . . . contacts made and knowledge gained will have an impact on each participant, while the proceedings and programs will provide a permanent record of what happened in Seattle this third week in July. Everyone hopes you find what you expected, because it was created to satisfy you, the attendee, but if not, you will have the opportunity to build your own puzzle. Next year's conference organizers, we are certain, would appreciate any constructive criticism of our efforts.

We would like to thank those who created prior SIGGRAPH conferences for the lessons learned and our co-workers for the support that made SIGGRAPH '80 possible. We also extend our good wishes to future organizers of SIGGRAPH conferences. And last, but not least, we would like to thank our management for permitting us to spend the time necessary to manage the organization of this conference.

Harvey Z. Kriloff
Robert A. Ellis
General Co-chairman

FROM THE SIGGRAPH '80 EXPOSITION CHAIRMAN

SIGGRAPH '80 proudly welcomes you to our fifth equipment and software exposition. This year's show is the largest ever devoted to computer graphics. The dynamic growth pattern is directly coupled to the impact of graphics on industry and the dedication of SIGGRAPH organizing committees and the vendor community.

The SIGGRAPH '80 Exposition typifies the emergence of computer graphics as a useful and usable tool for the 1980's.

WELCOME!

David J. Kasik
Exposition Chairman

SIGGRAPH '80 COMMITTEE

CO-CHAIRMEN

Robert A. Ellis . . . Boeing Computer Services Company
Harvey Z. Kriloff . Boeing Computer Services Company

TECHNICAL PROGRAM

James J. Thomas Battelle Northwest Laboratories

TUTORIALS

Ingrid Carlbom Pennsylvania State University
Cathy Eastman Tektronix, Inc.
Lee Metrick Tektronix, Inc.
Tim Stevenson Tektronix, Inc.

EXPOSITION

David J. Kasik . . . Boeing Computer Services Company
Lawrence E. Gaylord Boeing Commercial
Airplane Company

USER GROUPS

Guenther C. Schrack . . University of British Columbia

AUDIO VISUAL

L. Richard Speer University of Washington
Loren C. Carpenter Boeing Computer
Services Company

LOCAL ARRANGEMENTS

Johannes C. Sveinsson Boeing Commercial
Airplane Company
Joan D. Weddle Boeing Commercial
Airplane Company
John Sopka Digital Equipment Company
Phillip Katz Weyerhaeuser Company

FILM SHOW

Charles Csurí Ohio State University

PRELIMINARY PROGRAM

Jean E. Schweitzer Boeing Computer
Services Company
Gary J. Herron Boeing Computer
Services Company

FINAL PROGRAM

Eva K. Peoples Boeing Commercial
Airplane Company
Janice M. Hayden Boeing Commercial
Airplane Company

INDUSTRIAL TOURS

John W. Lewis Virginia Mason Hospital

MAILING

Joel Ware Boeing Computer Services Company
Margery A. Ellis Virginia Mason Hospital
Stanford N. Payzer Boeing Commercial
Airplane Company

PROCEEDINGS COVER

Steven Wells Tektronix, Inc.

CONFERENCE COORDINATOR

Curtis M. Geertgens Weyerhaeuser Company

COMMERCIAL PROGRAM

Donald E. Hankins . Boeing Computer Service Company
Ware Washam Control Data Corporation
Larry Trickey . . . Boeing Computer Services, Richland

ORGANIZER, PRESIDENT'S FORUM

Neil L. Johnson Vector General, Inc.

PUBLICITY

Jerry Schneider University of Washington
Paul A. Lewis University of Washington and
Boeing Computer Service Company

REGISTRATION

William P. Hogan . Boeing Computer Services Company
Wesley D. Banning Boeing Computer
Services Company

COMPTROLLER

Charles N. Turrill . . Boeing Computer Services Company

TREASURER

Robert E. Robins . Boeing Computer Service Company

STUDENT ASSISTANTS COORDINATOR

Steven Tamimoto University of Washington

SECURITY

H.D. Barnhart . . . Boeing Computer Services Company

PROGRAM COMMITTEE

Norman I. Badler University of Pennsylvania
Tony Lucido Texas A&M University
Fanya S. Montalvo . . . Lawrence Berkeley Laboratory
Carl Machover Machover Associates Corporation
Ken Anderson Anderson Publishing Company
Kellogg Booth University of Waterloo
John Dill General Motors Corporation
James Foley George Washington University
Henry Fuchs University of North Carolina
Bary W. Pollack University of British Columbia

SENIOR REVIEWERS

Larry Addison Terak Corporation
James Blinn Jet Propulsion Lab
Peter Bono Naval Underwater Systems Center
Robert Clark Argonne National Lab
Robert Ewald Los Alamos Scientific Lab
Donald Greenberg Cornell University
Richard Puk Megatek Corporation
Elaine Sonderegger SIGGRAPH Representative,
ANSI x343
Victor Wallace University of Kansas
Tony Lucido Texas A&M University
Fanya Montalvo Lawrence Berkeley Laboratory
Carl Machover Machover Associates Corporation
Kellogg Booth University of Waterloo
John Dill General Motors Corporation
James Foley George Washington University
Henry Fuchs University of North Carolina

EXPOSITION

Seattle Center Coliseum

Tuesday, July 15 12 Noon — 6:00 P.M.

Wednesday, July 16 10:00 A.M. — 6:00 P.M.

Thursday, July 17 10:00 A.M. — 6:00 P.M.

The annual SIGGRAPH Conference and Exposition is unique in the computer field. The excellence of the exhibitor community and their willingness to display the latest developments enhance the attraction of the conference as a whole. A conference attendee can compare products and services that will meet his requirements with state-of-the-art technology in one place.

SIGGRAPH takes pride in the balance achieved between the exposition and technical portions of the conference. This year guarantees to be the largest exposition yet held at a SIGGRAPH Conference.

EXPOSITION MARKS ITS FIFTH YEAR

This is the fifth year that the SIGGRAPH Conference has included an Equipment and Services Exposition supported by the graphics industry vendors. Starting with the 10 vendors added late in the planning for SIGGRAPH '76 in Philadelphia, and growing to 37 vendors at SIGGRAPH '77 in San Jose and 45 vendors at SIGGRAPH '78 in Atlanta, we were forced out of hotel facilities by the 79 exhibitors who were part of SIGGRAPH '79 in Chicago. At the five year mark we may have close to 100 exhibitors. We thank each exhibitor who has participated, but we think it bears particular mention that three exhibitors have "shown their wares" at all five SIGGRAPH Expositions. Those exhibitors are:

TEKTRONIX INCORPORATED
CONTROL DATA CORPORATION
SUMMAGRAPHICS CORPORATION

and the list of four year exhibitors includes over 20 names (we hope to celebrate their five year anniversary next year). In an industry noted for the large number of new companies it's nice to acknowledge those pioneers who prepared the way.

EXPOSITION OPENING CEREMONY

Tuesday, July 15, 1980

Seattle Center Coliseum 12:00 P.M. (Noon)

A short ceremony will be held to mark the opening of the largest computer graphics exhibition under one roof ever held. The guest list is still being finalized, but we expect some notables to be present. Come join the crowd and see it happen — everyone is invited.

The SIGGRAPH '80 Vendor Forum is being held in the mezzanine of the Seattle Center Coliseum, the same building that contains the exhibits. Sessions will be held July 16 and 17, between 10:00 A.M. and 5:00 P.M. The Vendor Forum consists of 30 minute sessions in which participating vendors are given an opportunity to present information on new and existing products and services. The final schedule for these sessions will be available at the Information

Center and at the entrance to the exhibit area. The preliminary list of participants includes:

- Adage, Inc,
- Bell Northern Research
- Boeing Computer Services Company
- DICOMED Corporation
- The Harvard University Newsletter
- Ikonas Graphics System
- Image Resource Corporation
- Integrated Software Systems Corporation (ISSCO)
- Lexidata Corporation
- Precision Visuals, Inc.
- Sanders Associates, Inc.
- Selanar Corporation
- Superset, Inc.
- Tektronix, Inc.
- Three Rivers Computer Corp.
- Trilog, Inc.

IMPORTANT PHONE NUMBERS

The SIGGRAPH '80 conference supplies these numbers as a service to our attendess. Listing does not imply endorsement of these services.

Dentist — 24 hour answering service 624-4912

Doctor — 24 hour answering service 622-6900,
364-9100

Pharmacy — G.O. Guy — 3rd & Union
Monday to Saturday 9:30 A.M. to 6:30 P.M. 622-4842

Emergencies, Ambulance, Fire, Police 911

Language Bank 622-4250
International Center 682-6986
British Consulate 622-9253

Metro Transit System 447-4800

Poison Control Center 634-5252

Post Office
3rd & Union Street 442-1978

SIGGRAPH Seattle Center Message Center 345-2633

Airport Hustlebus 682-5950

Kiana Lodge 682-2370

Tillicum Village 329-5700

Seattle Center
Public Information (Not Siggraph) 625-4234

State Patrol 455-7700

Tourist Information Seattle/King County
Convention & Visitors Bureau, 1815 7th Ave. 447-7273

Weather Report 662-1111

Washington State Ferries 464-6400

ALPHABETICAL LISTING OF EXHIBITING COMPANIES

ABW CORPORATION**Booth No. 706****P.O. Box M 1047****Ann Arbor, MI 48106****Terry Wynn****President****(313) 971-9364**

ABW Corporation features the TEKSIM, the Apple II/Tektronix 4010 simulator. TEKSIM uses the high resolution plotting capabilities of the Apple to allow the user to access Plot 10 or Plot 10 compatible software packages on a host system. Although the Apple has approximately one-fourth the resolution capabilities of a Tektronix terminal, a TEKSIM/Apple combination offers a substantial cost advantage, according to the company, and includes such features as multi-colored displays, multiple erase, and standard video output which allows any television set to function as a monitor.

ADAGE, INC.**Booth No. 432****One Fortune Drive****Billerica, MA****Clare Daley****Mgr., Public Relations and Advertising****(617) 667-7070**

Adage, Inc. designs, manufactures and markets interactive computer graphics terminals and systems. For IBM compatible system users, the Adage 4250 is a plug-compatible improvement on the costlier IBM 3250. Full 3D graphics are available on the Adage 4370. A unique combination of both terminals is found in the 4380. For mini-computer users, the 4100 series offers 2 and 3D models.

Adage systems feature local hard copy, host channel speed interfaces, image buffer and host computer off-loading.

Adage graphics systems are used by commercial and government customers in applications such as CAD/CAM structural analysis, mapping, simulation and training and command and control.

ADVANCED ELECTRONICS DESIGN, INC.**440 Potrero Avenue****Booth No. 208****Sunnyvale, CA 94086****J.D. Kennedy****Vice President/Marketing****(408) 733-3555**

The AED 512 color graphics/imaging terminal is processing and displaying dynamic graphics and animated images. Data from LSI-11 mini computer-based floppy disk and Winchester drive storage systems are shown with up to 256 colors per display frame. The AED 512 also emulates the Tektronix 4010-4014 terminals and runs Plot 10.

THE ANDERSON REPORT
P.O. Box 3534
Simi Valley, CA 93063
Ken & B.J. Anderson
(Ken) Publisher (B.J.) Editor
(805) 581-1184

Booth No. 316

THE ANDERSON REPORT is a monthly newsletter edited exclusively for the computer graphics industry. Each issue features current news of the industry, information of New Products, Orders & Installations, People & Places, the International Scene, and a Calendar Section. Every issue also includes a special INSIDE REPORT on a major computer graphics vendor that provides a comprehensive look at their background, products, market position, and an overview. THE ANDERSON REPORT also provides inplant seminars and special consulting services for computer graphics users.

APPLE COMPUTER, INC.
10260 Bandy Drive
Cupertino, California 95014
John Jones
Product Manager
(408) 996-1010 ext. 2134

Booth No. 531

Manufacturer of personal and Scientific computers with color graphics capabilities. Low and high resolution modes with 16 color graphics and digitizer input.

APPLICON INCORPORATED
420 New Boston Park
Woburn, MA 01801
Robert Patnaude
Sales Manager
(617) 935-9675

Booth No. 436

Applicon Incorporated will exhibit the Applicon Ink-Jet Color Plotting System. Using the unique Hertz In-Jet technology, the system consists of a Plotter unit, a magnetic tape transport, and a powerful set of applications programs that allow the user to create multi-colored maps, 3-D representations, Business Charts, and Remote Sensing output such as "Landsat."

Using three constant flow ink-jets of Magenta, Yellow and Cyan, the Plotting unit converts digital information into rasterized data creating a full Color Plot. Over 5000 different color shades and up to 17,000 distinct raster patterns can be addressed to produce amazing Color Plots.

APPLIED DYNAMICS INTERNATIONAL
3800 Stone School Road
Ann Arbor, MI 48104
Erdvilas K. Bankaukas
Marketing Communications Manager
(313) 973-1300

Booth No.
216

Applied Dynamics International will exhibit the LIGHT™ family of raster graphics composition of character/vector display, area fill/run length instructions,

and user loaded routines. The LIGHT 50 model provides up to 256 colors from a loadable palette of up to 1024 out of a total of 65K. Pixels are stored in arrays as large as 1024x1024 or 512x2048, with scale and scroll for any 640x480 viewport. Successive views can be linked and timed in "movie loop" sequences for animation. LIGHT's modular architecture supports multi-color graphics overlay and high speed display composer.

ASSOCIATION FOR COMPUTING MACHINERY

1133 Avenue of the Americas

Booth No. 403

New York, NY 10036

Louis J. Fiora

Conference Coordinator

(212) 265-6300

As *the* educational and scientific society of the information processing community, ACM attracts and serves the finest theoreticians and practitioners throughout the world, the leading edge of computer technology—gathering at conferences and chapter meetings, publishing and reading the most probing technical literature, sharing ideas and information, promoting the common good of computing professionals. It is a volunteer organization whose composition and activities have always reflected the changing nature and needs of people engaged in the computing arts and sciences.

AYDIN CONTROLS

Booth No. 511

414 Commerce Drive

Ft. Washington, PA 19034

Eric Gimbal

Trade Show Coordinator

(215) 542-7800

AYDIN CONTROLS, a leading manufacturer of full color computer graphic display systems, offers the Model 5216 Display Computer, our most powerful, fully programmable, modular display system with extraordinary hardware speed capability and software support for complete 1024 x 1024 x 16 bit pixel addressability. Models 5217 and 5215 provide from single up to 8 independent user workstations, respectively, to dominate OEM process control applications. A full line of militarized stroke-writing systems; medium and high resolution CRT Monitors; and an array of hard-copy devices compliment AYDIN CONTROLS' products, AYDIN CONTROLS — The Leader.

BELL-NORTHERN RESEARCH

Booth No 620

P.O. Box 3511, Station "C"

Ottawa, Ontario, Canada K1Y 4H7

Olga Lapczak

Manager, Graphics Technology

(613) 226-5400

Bell-Northern Research, the largest privately owned research and development organization in Canada, is widely recognized as a world leader in electronics and digital communications.

Among the many software packages developed for in-house, BNR is now making available the Virtual Graphics Machine. VGM, being a full implementation of the SIGGRAPH '79 Core System, specifically solves both the critical problems of portability between types

of graphics devices and processors; and longevity of software. VGM goes considerably further by providing raster support, an extended set of graphics primitives and, built upon them, a very natural method of display manipulation designed to facilitate such graphics applications as business systems, statistical analysis, architectural and engineering design and others.

BENSON-VARIAN
385 Ravendale Drive
Mountain View, CA 94043
Robert Britt
Vice-President, Sales
(415) 965-9900

Booth No 527

Benson-Varian offers a complete selection of pen plotters and electrostatic printer/plotters for any computer graphics hardcopy application.

Pen plotters range in width from 13 inches through 36 inches, offering plotting speeds up to 44.5 inches/second (diagonal), 4-pen writing head, selectable displacement and acceleration of 5.7g. Electrostatic printer/plotters are available in widths from 11 inches through 36 inches. Plotting speeds of 4 inches/second and printing speeds of 2,000 lines/minute are available. Benson-Varian also features the exclusive Quadrascan^R writing head, providing the smoothest line quality available. Vector processors for minicomputers and mainframes will also be demonstrated.

BENWILL PUBLISHING CORP.
924 Westwood Boulevard, Suite 610
Los Angeles, CA 90024
Yuri Spiro
Publisher
(213) 478-3017

Booth No. 722

Benwill Publishing Corporation publishes among many others Digital Design and Minicomputer News. Both publications are heavily committed to the progress and promotion of the computer graphics industry.

BOEING COMPUTER SERVICES CO.
565 Andover Park West
Tukwila, WA 98188
Bob Robins
Graphics Product Sponsor
(206) 575-5261

Booth No. 405

BCS makes available a wide variety of graphics software products and output capabilities on its time-sharing services, MAINSTREAM-EKS and MAINSTREAM-CTS. Interactive and display-only screen graphics, several modes of remote and data center plotting, and microfiche and microfilm output are all supported. Software products to be demonstrated include: the general graphics systems BIGS (BCS Interactive Graphics System) and DISSPLA; TELL-A-GRAF, the command driven front-end to DISSPLA; the interactive, finite-element model building tool, SUPERTAB; the surface approximation and contour mapping packages, SACM and GPCPII; and the graphics component of BCS's EIS (Executive Information Services), an interactive management information system.

CEC DIVISION/BELL & HOWELL**Booth No 642****360 Sierra Madre Villa****Pasadena, CA 91109****Edward C. Barbeau****District Manager****(213) 872-2960**

FEATURING THE CEC/BELL & HOWELL GRAY SCALE HARD COPY PRINTER FOR COLOR GRAPHICS: Up to 16 shades of gray can now be translated onto inexpensive electrosensitive paper from black and white or color graphics terminals with the CEC model 912 Gray Scale Printer. It produces archival copies with over 200 dots per inch resolution — without chemicals, toners or further processing. A complete, self-contained system, the 912 requires only a single cable connection for digital data or video signal.

CAHNERS PUBLISHING/MINI-MICRO SYSTEMS**221 Columbus Avenue****Booth No. 539****Boston, MA 02116****Jerry Hill****Marketing Manager — Mini-Micro Systems****(617) 536-7780**

Mini-Micro Systems is edited for both OEM systems personnel designing mini/microcomputer related equipment into their systems and sophisticated end users using minicomputers and microcomputers in conjunction with mainframe computers, for example, scientific and engineering oriented end users. Coverage includes applications for minicomputers, microcomputers, microprocessors, memory systems, peripheral equipment, data communications and distributed data processing and other minibased systems.

CALIFORNIA COMPUTER PRODUCTS**Booth No.****2411 W. LaPalma****340****Anaheim, CA 92801****Deryl Finney****Director of Public Relations & Advertising****(714) 821-2282**

CalComp manufactures the widest line of graphics output devices in the industry. Ten pen plotter models range from low cost drums to a high-performance flatbed and the industry's only beltbeds. Also, a total of six electrostatic plotter/printer models are produced in either 11 or 22 inch widths. The company offers two COM units — one with graphics capability only, the other includes alphanumerics. For CAD/CAM applications, CalComp has an interactive graphics system. The company provides extensive product support with a wide range of software packages, and with 35 service offices in the U.S. and more than 40 internationally.

CELCO
1150 East 8th Street
Upland, CA 91786
Paul Constantine
Vice-President
(201) 327-1123 or (714) 985-9868

Booth No. 231-C

As the leading manufacturer of high speed, high resolution film recording systems, CELCO will be displaying its CFR 4000 Color Film Recorders.

Featuring the high speed Digital Graphic Processor, which enables the 3-RIVERS SLIDEMAKER to compute color slides with a minimum of overhead, the CFR 4000 can process over 180 slides an hour.

This throughput capability, combined with CELCO's reputation for the finest resolution, uniformity and reliability, make the CFR 4000 highly desirable for serious production environments.

Optional features displayed include PREVIEW, a color video terminal and software system which allows the operator to preview slide data for quality control and file handling purposes.

CHILD INCORPORATED
P.O. Box 764
Lawrence, KS 66044
Geoff Roper
Executive Vice-President
(913) 841-4096

Booth No. 525

Two facets of CHILD's new graphics language are introduced. The first is SLIDES (System for Locating and Interactively Displaying Elements in Space), a turnkey system for enhancing the production of all forms of dynamic visual communication. The second is OOG (Object Oriented Graphics Language) the graphics language in which SLIDES was written and other applications are being developed. Emphasis is placed on the ability to interactively create, store, and process pictures by defining the attributes of objects making up those pictures. SLIDES and OOG represent an ongoing commitment by CHILD to develop low cost/high performance systems for the discerning user.

CHROMATICS, INC.
3923 Oakcliff Industrial Court
Atlanta, GA 30340
Jill Floyd
Show Coordinator
(404) 447-8797

Booth No. 711

Chromatics is a manufacturer of color graphics computers, high resolution, in 13", 15" & 19" tubes.

COLORADO VIDEO**Booth No. 203****Box 928****Boulder, CO 80306****Patty Nettles****Adv. Mgr.****(303) 444-3972**

Colorado Video manufactures video computer peripherals, video processing and measuring instruments. Intended for computer use are the Video Digitizer 270A, Video Frame Store 274, and X-Y Digitizer 622. Video digitizers are available in resolutions to 625 lines by 2000 pixels by 8-bit Z. Video Frame Stores are available in resolutions to 512 lines by 256 pixels by 8-bit Z; both computer I/O and DMA ports are offered. Image processors include the 606 Color Quantizer and the 608 Shading Generator. The 606 maps colors to grayscale values in a video picture. Up to 16 independently adjustable colors may be assigned to respond to 16 variable thresholds of picture brightness. The 608 counteracts unequal brightness across the image.

COMPUTER DESIGN**Booth No. 700****11 Goldsmith Street****Littleton, MA 01460****John McGillivray****Treasurer****(617) 486-8944**

The Magazine of Computer-Based Systems; and primarily concerned with the design and application of Computer-Based systems, Micro Processor-Based Equipment and other products with function in Digital Systems. Current Issues of the Magazine will be distributed.

COMPUTER GRAPHICS WORLD**Booth No. 615****54 Mint Street****San Francisco, CA 94103****Randall Stickrod****Publisher****(415) 543-0978**

Computer Graphics World is the only monthly trade magazine devoted exclusively to computer graphics. Editorial content features extensive coverage of computer graphics applications and comprehensive news coverage of new developments throughout the industry. Additional regular features include interviews with key newsmakers, hardware and software reviews and evaluations, and surveys of computer graphics users. Special issues focus on topics such as international developments, rapidly developing areas of application, such as management information systems and CAD/CAM, and highlights from the major trade shows and conferences.

COMPUTERVISION CORPORATION Booth No. 626
201 Burlington Road
Bedford, MA 01730
Stephen Gondert
Public Relations
(617) 275-1800

Computervision Corporation of Bedford, MA is in the industry automation business. Based in Bedford, MA., Computervision is the leading manufacturer of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) Systems.

Computervision's CAD/CAM Designer systems enable companies to increase productivity by automating many of the highly complex and repetitive design and manufacturing tasks previously performed manually.

Computervision's Designer systems are turnkey. That is, the company manufactures both the equipment (hardware) and the computer programs (software) which enable customers to simply turn a key to start using the system. There are over 900 Designer systems in operation throughout the world, making Computervision the largest CAD/CAM supplier with approximately 40% of the worldwide market.

COMTAL CORPORATION Booth No. 637
505 W. Woodbury Road
Altadena, CA 91001
Harry C. Adrews
Director of Marketing
(213) 797-1175

Comtal manufactures a complete product line of digital image processing and display equipment, ranging from simple peripheral devices to sophisticated stand-alone image exploitation and page make-up stations. The product line includes peripherals (8000-R series), modular image processing systems (Vision One/20 series), sophisticated digital video input processors (DVIP series), spatial warping hardware (mapper series), twin display page make-up printing and pre-press electronics (Twin display series), and high resolution processor background task hardware, (HRP series).

CONFERENCE BOOK SERVICE INC Booth No.
228 S. Washington Street 727
Alexandria, VA 22314
Carmen McDonald
Exhibit Coordinator
(703) 549-8023

A browsing collection of current books and journals

CONTROL DATA CORPORATION Booth No. 533
8100 — 34th Avenue South
Minneapolis, MN 55440
R. Karl Getsinger
Manager, Applications
(612) 853-3244

Control Data ranks among the world's largest corporation. The Company's Computer Services include large-

scale computer equipment and a broad range of consulting, education services and data services as well as maintenance for computers and similar equipment. Comprehensive software products are available for Manufacturing, Electrical, Environmental, Energy Education, Petroleum and Mining Industries.

CROMEMCO, INC.

Booth No. 607

280 Bernardo Avenue

Mountain View, CA 94043

Ken Wilkerson, OEM Sales Manager

(415) 964-7400

Cromemco manufactures a complete line of high performance microcomputer systems including the SDI, a high resolution graphics interface designed for use in these systems. The SDI, which can be used to display color or black-and-white images with up to 756 by 484 point resolution, is the most versatile video interface in the microcomputer industry today. With features such as, high point resolution, color map selection, dual page windowing, automatic area fill mode, and NTSC broadcast compatibility, the SDI is designed to meet the demands of professional and industrial environments.

DALLAS CONVENTION & VISITORS BUREAU

1507 Pacific Avenue

Registration Area

Dallas, TX 75201

George Smith

Director of Services

(214) 651-1020

The 1981 ACM SIGGRAPH Exposition and Conference is scheduled for the Dallas Convention Center, Dallas, Texas, August 3 — 7.

DEANZA SYSTEMS

Booth No. 221

118 Charcot Avenue

San Jose, CA 95131

Charles W. Nordby

National Sales Manager

(408) 263-7155

DeAnza Systems produces a complete line of image display and processing equipment, ranging in resolution from 256² to 1024² systems with from 8 to 72 bits of image memory per system.

DESIGN AIDS, INC.

Booth No. 635

1661 E. Chapman Avenue

Fullerton, CA 92631

Nancy Savinelli

Sales/Marketing Manager

(714) 879-4550

"Drafting System 1", is the only Non-Gridded drafting system which allows users to digitize directly from rough, free-hand sketches. A "D" size electronics schematic/logic drawing is input in only one hour. The computer straightens the crooked lines, inputs the correct size symbols and imposes alignments among

symbols input by the operator to provide aesthetically pleasing drawings. Net and Bill Lists are automatically extracted from the data base of the schematic and provide input to printed circuit board routers. Auto-lettering and Autopin numbering simplifies input to a router and full Back-Annotation provides documents which always agree.

DICOMED CORPORATION
9700 Newton Avenue South
Minneapolis, MN 55431
Donald W. Sticksel
National Sales Manager
(612) 887-7100

Booth No. 214

Dicomed, a leading precision graphic COM system manufacturer, introduces DICOMEDIA II, a color raster graphics system which creates high resolution, color 35mm business graphics and presentation slides. The D38 Design Station features a Tektronix 4027 color graphic design terminal, dual floppy disk unit, and DEC PDP 11/23 controller, which enables users to create, preview, edit, store, retrieve, transmit, and receive color graphic slide data via friendly software commands and prompts. The DICOMEDIA II Production System includes a D48 Color Film Recorder, DEC PDP 11/34 operating under RSX-11M Operating System, and the Production System software. Slide data created on the D38 is stored on the dual floppy disk unit and processed by the production system.

DIGITAL EFFECTS INC.
321 W. 44 Street
New York, NY 10036
Judson Rosebush
President
(212) 581-7760

Booth No. 326

Digital Effects Inc. specializes in the production of computer animation and special effects for the motion picture and television industry, including 3D wireframe and solids, textures, illuminatories, image processing and paint. We also build software and systems for custom applications and offer a color COM film recording service on our Dicomed D48.

Our modeling and simulation software, called Visions, includes capabilities for digitizing and editing 2D and 3D objects, organizing environments, displaying on a variety of devices. Our image processing and painting system supports video digitizing, typical image processing techniques and a video palette; output is on tape or film.

DIGITAL ENGINEERING, INC.
1775 Tribute Road, Suite C
Sacramento, CA 95815
Keith J. Sutton
V.P. Marketing
(916) 920-5600

Booth No. 802

The company's Retro-Graphics printed circuit card transforms the Lear Siegler ADM-3A Dumb Terminal

into a sophisticated graphics terminal. Retro-Graphics generates graphs and pictures on a 512 x 250 plotting grid and is Tektronix Plot 10 software compatible.

Digital Engineering also makes optional devices that are compatible with the Retro-Graphics upgraded Dumb Terminal: a cross-hair cursor and printer. Graphx-Printer uses electrosensitive technology to produce vivid graphics hardcopy in under 20 seconds.

DIGITAL EQUIPMENT CORP.

Booth No. 519

**5 Flagstone Drive
Hudson, NH 03051
Anil Porbunderwala
(603) 884-6488**

VS11 and VSV11 color and monochrome raster graphic systems.

DUNN INSTRUMENTS

Booth No. 110

**544 Second Street
San Francisco, CA 94107
Mason Killebrew, V.P./Marketing
Barbara Claxton, Sales Adm.
(415) 957-1600**

Dunn Instruments returns to SIGGRAPH one year after the introduction of the Dunn Color Camera System at SIGGRAPH '79. The Model 631 was enthusiastically received and declared the hit of show. Dunn marks SIGGRAPH '80 with the introduction of two new systems to satisfy both ends of the spectrum in format choice and flexibility. The Model 632 provides for small format prints and transparencies at entry level pricing under \$6000. The Model 633 introduces full software control (RS-232C) over all camera functions including multiple imaging on 8 x 10 film. DUNN LEADERSHIP AND INNOVATION CONTINUE IN COLOR IMAGING.

DYNAIR ELECTRONICS, INC.

Booth No. 614

**5275 Market Street
San Diego, CA 92114
Tom Meyer
Product Manager
(714) 263-7711**

Dynair manufactures an extensive line of distribution, equalization, and switching products for monochrome and color video systems. Single level and RGB high resolution systems are accommodated.

A wide variety of switching products are available for applications requiring simple two-inputs by one-output up to 1000 inputs by 1000 outputs, non-blocking with manual and/or computer control.

High quality distribution-equalization products for use with 75 ohm coaxial and 124 ohm balanced cables can accommodate distances between the source generator and monitor of over 3000 meters without the need for intermediate amplifiers will be on display.

Tom Meyer, Product Manager; and Bob Jacobs, Sales Manager will be at the booth to assist customers.

E & O SYSTEMS, LTD.**Booth No. 231-B**

**2998 Scott Boulevard
Santa Clara, CA 95050
Don Power**

**Vice-President — General Manager
(408) 727-1506**

As the BARCO North American distributor, we will show the full line of Barco Color Data Displays. This includes 13, 15, 19, and 25" models in both Delta-gun Shadow Mask, and PIL (13" model only).

The CDCT 3/51 will be shown operating on 1024 x 1024.

EIGEN**Booth No 728**

**Shaw's Hill,
Grass Valley, CA 95945
George Foster
Vice President
(916) 273-1341**

A High Resolution magnetic video disc recorder. Records or plays video images, 600 fields or 300 frames singly, or at motion rates up to full speed video.

ELECTROHOME ELECTRONICS**Booth No. 803**

**809 Wellington Street North
Kitchener, Ontario, Canada N2G 4J6
Doug Wismer
Video Display Marketing Manager
(519) 744-7111**

Electrohome Electronics is a quality manufacturer of Color and B & W CRT video displays for OEM skeleton and Packaged monitor users.

It has gained considerable expertise in both raster and X-Y scanning techniques.

A new large screen, high resolution data/graphics projector has been developed that synchronizes with most CRT-type computer terminals.

Contract engineering and manufacturing services are also available.

EVANS & SUTHERLAND**Booth No 734**

**580 Arapeen Drive
Salt Lake City, UT 84108
John Elliott
Communications Specialist
(801) 582-5847**

High performance 3-D computer graphics with black and white and 449 color capability.

GTCO CORPORATION**Booth No. 328**

**1055 First Street
Rockville, MD 20850
B.J. Fadden
President
(301) 279-9550**

GTCO will exhibit various sizes and types of tablets and large area Digitizers with and without microprocessing

capabilities. Also a new under \$10,000 Interactive Graphic Digitizer including Graphics Display. The GTCO Digitizer family provides the most comprehensive line of Digitizers. Available in 12 standard sizes, you have a choice of three types of surfaces: white opaque, white translucent for backlighting and transparent for rear projection. GTCO's patented printed circuit, grid array tablets provide 1000 lines per inch resolution using only two lines per inch in the precision grid array. The Micro and Graphics options add processing, display and editing on-line and off-line.

**GENERAL ELECTRIC VIDEO DISPLAY
EQUIPMENT OPERATION** **Booth No. 213**
Electronics Park, Building 6, Room 205
Syracuse, NY 13221
Jerrold P. Gundersen
Marketing Manager
(315) 456-2562

General Electric will demonstrate large screen television projection of alpha-numeric, graphic and video tape presentations. Projectors will be used in several of the tutorial and technical seminars as well as in booth 213. There are fifteen models available to meet most professional applications.

GENISCO COMPUTERS **Booth No. 645**
3545 Cadillac Avenue
Costa Mesa, CA 92626
John Fletcher
National Sales Manager
(714) 556-4916

Genisco is introducing its new Interact-10 Display Station, a direct replacement for the popular Tektronics 4014 Series Display Stations, but with all the advantages of Raster-Scan technology. In addition, Genisco will be displaying a wide variety of interactive color and monochrome graphic display systems having resolutions up to 1280 x 1024. Included will be the low-cost GCT-3400 and GCT-3450 OEM models.

GERBER SYSTEMS TECHNOLOGY **Booth No. 226**
40 Gerber Road East
South Windsor, CT 06074
Debra Conticello Smith
Marketing Communications Manager
(203) 644-2581

IDS-80, Interactive Design System, is a high productivity system providing the basis for the integration of computer aided design (CAD) and manufacturing (CAM). The advanced design of IDS-80 enables the manufacturing enterprise to greatly reduce the time and cost from design engineering to finished product. IDS-80 is designed to provide the best performance and capability in the turnkey graphics industry today. The major areas of technical achievement have been in total system design, the graphic workstation, and application software products.

GRAPHIC CONSTRUCTIONS, INC. **Booth No. 324**
320 South Boston, Suite 1014
Tulsa, OK 74103
Littleton Daniel, Jr.
President/Chief Executive Officer
(918) 582-9446 TWX: 910-845-3009

Turn-Key desktop computer-assisted-drafting systems for the building construction industry.

GRINNELL SYSTEMS CORPORATION **Booth No. 732**
2159 Bering Drive
San Jose, CA 95131
John W. Metzler
President
(408) 263-9920

Grinnell Systems Corporation manufactures television display systems and frame buffers for use in high resolution line drawings, computer graphics, and image processing.

THE HARVARD NEWSLETTER ON COMPUTER GRAPHICS
READER SERVICE DEPARTMENT
P.O. Box 89 **Booth No. 429**
Sudbury, MA 01776
Stanley Klein
Publisher/Editor
(617) 443-4671

Harvard Univ.'s twice-a-month newsletter on computer graphics aims to keep the computer and associated communities informed on key developments in computer graphics. Its emphasis is on providing understanding, perspective, interpretation, and economic information, particularly to serve CG users and prospective users. Each annual subscription (\$125) includes a 62-page supplier directory—the only specialized CG reference volume available—covering purveyors of CG hardware, software, systems, and services.

HEWLETT-PACKARD **Booth Nos. 418 & 420**
16399 W. Bernardo Drive
San Diego, CA 92127
Jan Edwards
Marketing Specialist
(714) 487-4100

HP has developed a broad range of graphics capabilities. For business, HP has developed a graphics workstation around the 2647A Intelligent Graphics Terminal. With a few keystrokes, tabular data can be plotted on screen as a bar graph, line graph or pie chart or directly onto paper or overhead transparencies.

For engineering and science, the 2647A Intelligent Graphics Terminal provides interactive capability, the 9845C Desktop Computer provides graphics solutions in color, and the HP1000 Computer System with GRAPHICS/1000 software provides multi-user, multi-language graphics capability. Easily interfaced graphics peripherals include flatbed plotters, a digitizer, graphics printers, displays, and a plotter/printer.

HOUSTON INSTRUMENT**Booth No. 312**

**8500 Cameron Road
Austin, TX 78753
Gareth DePutron
Program Coordinator
(512) 837-2820**

Houston Instrument, a Division of Bausch & Lomb, Inc., will be displaying their new CPS - 15/6 with built in plotter controller, a sample of their Electrostatic plotter/printer line, and portions of the new family of Micrographic HILOTS.

IBM CORPORATION**Booth No. 413**

**1133 Westchester Avenue
White Plains, NY 10604
John Spivack
Manager, Engineering Support
(213) 736-4000**

Data Processing Products and Services.

**IEEE COMPUTER SOCIETY
(COMPUTER MAGAZINE)****Booth No. 529**

**5855 Naples Plaza, No. 301
Long Beach, CA 90803
Dawn Peck
Advertising Director
(213) 438-9951**

The IEEE Computer Society now includes over 40,000 members in 65 chapters worldwide. Society membership means regular communication and direct technical interchange with the foremost practitioners of computer science and engineering through participation in local chapter meetings, seminars and workshops.

In addition, members receive an automatic subscription to *COMPUTER Magazine*, discounts on registrations for conferences, symposia, and workshops; discounts of 25% and more on conference publications and tutorials (over 300 titles in the fields of computer science and engineering); and reduced rates on subscriptions to special-interest *Transactions* and *Journals*, including the new *IEEE Computer Graphics and Applications*, premiering January 1980.

IKONAS GRAPHICS SYSTEMS, INC.**Booth No. 204**

**403 Glenwood Avenue
Raleigh, NC 27603
Peter Evans
Engineering R&D
(919) 833-5401; (919) 833-9149**

IKONAS designs and manufactures high-performance state-of-the-art-hardware for faster computer graphics and image processing. Configuring systems from standard or custom designed modules, Ikonas delivers systems exactly meeting customer requirements.

****High Performance Hardware—microprogram-
mable 200 nsec 32 bit processor, 3-D transfor-
mation hardware, real-time vector generator, fast
and flexible look-up memories, video processor.**

- **Large Image Memories—frame buffers (512² x 8 up to 1024² x 64 standard, larger on custom basis).
- **Flexible Display—pan, scroll, zoom, full window and viewport control, variable frame and line rate.
- **Real-Time Video Input—16MHz, 8 bits/sample, full window and viewport control.

IMAGE RESOURCE CORPORATION

Booth No.

2260 Townsgate Road

337

Westlake Village, CA 91361

Warren Sullivan

Vice President

(805) 496-3317

Image Resource Corporation is exhibiting the new Videoprint product line. Videoprint Systems are the first economical means of producing full-color, distortion free, hard copy from images generated by computer graphics or video signals.

Videoprints are photographic prints, negatives or transparencies in 4" x 5", 3¼" x 4¼", Polaroid SX-70 or 35mm sizes. Videoprint Systems are completely self-contained, desk-top units that accept NTSC or RGB signals. The system eliminates problems associated with photographing a video monitor directly such as barrel distortion, raster lines, stair stepping, lack of color fidelity and color desaturation. Videoprint 5000 Systems sell for approximately \$6,000.

IMLAC CORPORATION

Booth No. 505

150 A Street

Needham, MA 02194

R. Kevin Ryan

Marketing Communications Manager

(617) 449-4600

Imlac manufactures a line of intelligent, vector-refresh graphics terminals used primarily in computer-aided design and manufacturing (CAD/CAM). These DynagraphicTM series terminals are supported by pre-programmed terminal firmware and a powerful Host Fortran Library. An RS232 interface, allowing direct or remote hook-up to several computers, makes system integration easy. Available Interactive Devices include Light Pen, Joystick and Data Tablet. Interfaces for electrostatic and pen plotters are available. Applications include Architecture, Pattern-Nesting, Computer Assisted Chemical Design, Ship Lofting and Finite Element Modeling.

INFORMATION DEVICES CORPORATION

2500 Mission College Boulevard

Booth No. 438

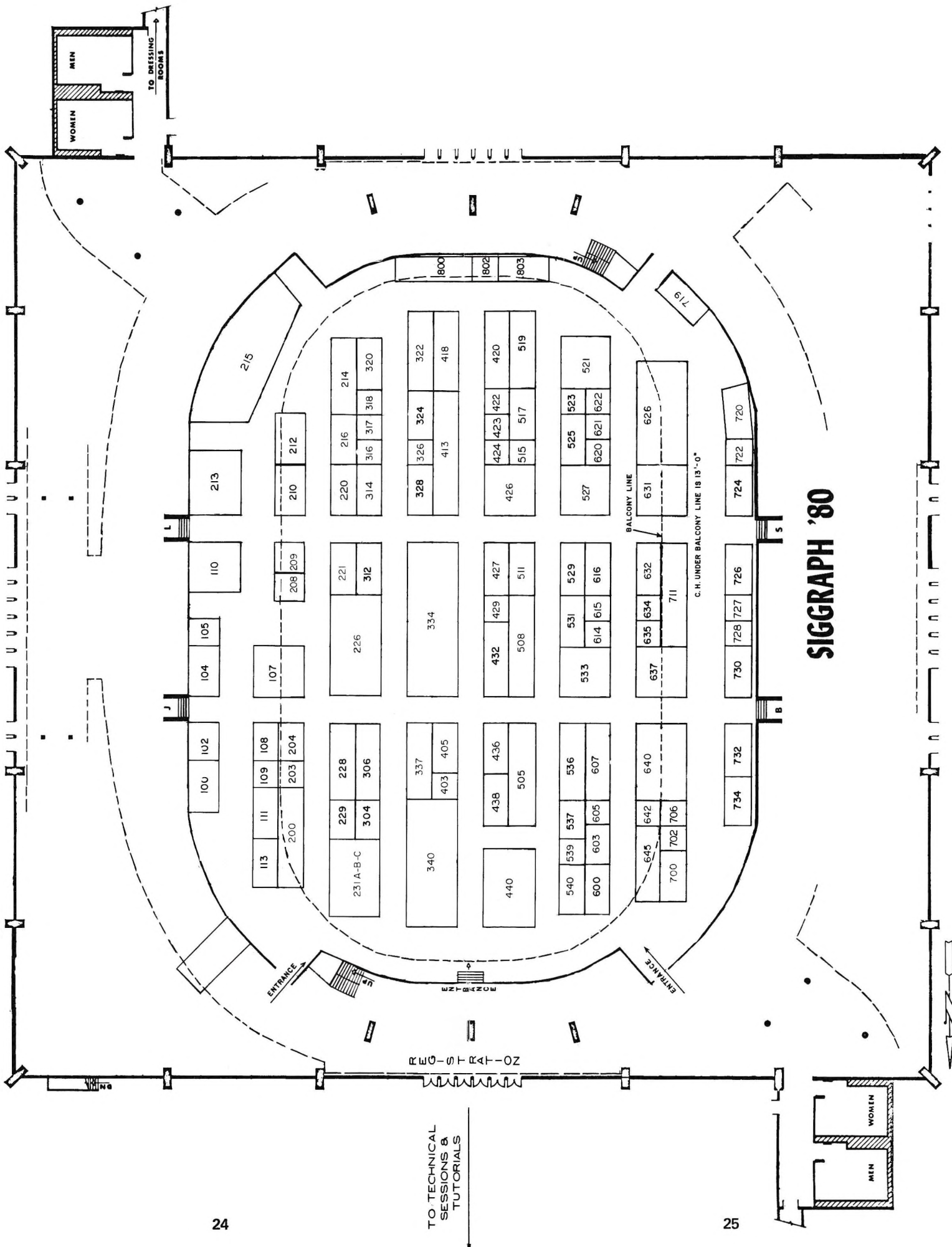
Santa Clara, CA 99054

Frank Deak

Vice President

(408) 727-8100

Information Devices Corporation manufactures the RMS 600, a remote batch printer/plotter designed for quick access to graphic services provided on large scale hosts. The unit incorporates a 600 CPS dot matrix printer which can plot at 64 or 128 dots per inch at



SIGGRAPH '80

the user's discretion. The RMS 600 communicates with the host via industry standard protocols, such as IBM 2780 and 3780. Information Devices Corporation also supplies a CalComp compatible library and hardware independent plot software system which provide a variety of post-processors to allow the user to zoom, window and rotate his plots independently of the original applications program.

INTEGRATED SOFTWARE SYSTEMS CORP.

**4186 Sorrento Valley Boulevard
San Diego, CA 92121**

Booth No. 212

**Robert W. Adams
Director of Sales
(714) 452-0170**

Integrated Software Systems Corporation (ISSCO) will demonstrate DISSPLA, TELL-A-GRAF, and ODYSSEY, graphic software systems which transform any data into publication-quality 2-D and 3-D charts, graphs and maps. Marketed internationally, the software is used for management review, reports, research analysis, and presentations in a variety of scientific, engineering and business areas. DISSPLA and TELL-A-GRAF have been installed on over 34 computer and operating system combinations at over 400 installations. ODYSSEY provides a complete set of capabilities to manipulate cartographic data bases and display the resulting information as thematic maps. ALL ISSCO software packages and device-independent running on over 50 devices including CalComp, Dicomed, Hewlett-Packard, Houston Instrument, Tektronix and many others.

INTELLIGENT SYSTEMS CORP.

Booth No. 426

**225 Technology Park/Atlanta
Norcross, GA 30092**

**Joy Baker
Executive Assistant
(404) 449-5961 Ext. 241**

Manufactures low-cost color CRT terminals, color desktop computers, color display monitors and color micro-computer systems. ISC introduced the first CP/M compatible desktop computer, the 8063, to feature color graphics displays as well as a color work processing computer system, the 8043.

KMW SYSTEMS CORPORATION

Booth No. 605

**8307 Highway 71 West
Austin, TX 78735**

**Fred R. Klingensmith
Sales Manager
(512) 288-1453**

KMW manufactures a complete line of communications front-ends for graphics equipment including pen plotters, matrix printer/plotters and graphic CRT's. Available communications protocols include IBM 2780, 3780, 3270, and HASP multi-leaving.

KMW will be demonstrating a HASP multi-leaving workstation and Random Vector Processor driving a pen plotter and an electrostatic printer/plotter on a 4800 baud dial-up line from McAuto.

LEXIDATA CORPORATION

Booth No. 220

37 North Avenue

Burlington, MA 01803

Robert S. Scalea

Corporate Communications Specialist

(617) 273-2700

Lexidata designs, develops, manufactures and markets a full line of graphic and imaging display systems. The company's raster refresh displays are used as intelligent peripherals to minicomputers. Raster technology offers high resolution, brightness, a multitude of colors, selective writing/erasing, and digital manipulation of data.

Lexidata's System 3400 consists of a memory buffer for storing display data, one or more memory controllers, and a high-speed microprocessor for graphics generation and image manipulation. The System 3400 drives a variety of video monitors, with bandwidths ranging in excess of 100MHz. Compact packaging provides a single-chassis design with self-contained power supplies and cooling.

LOGIC SCIENCES, INC.

Booth No. 209

10535 Rockley Road, Suite 103

Houston, TX 77099

Robert R. Fuller

Vice-President — Marketing

(713) 879-0536

Logic Sciences, Inc. is a systems house specializing in CAD/CAM and High Speed Raster devices and systems.

M & S COMPUTING, INC.

Booth No. 508

P.O. Box 5183

Huntsville, AL 35805

Edward W. Eva

National Sales Manager

(205) 772-3411

M & S Computing, Inc. is a vendor of Turn-Key Interactive Design Systems with powerful non-graphic data based management capabilities. The system provides capabilities for generation of drawings and associated bills-of-material for a cross section of disciplines.

MAGNOVOX DISPLAY SYSTEMS

Booth No. 523

1313 Production Road

Fort Wayne, IN 46808

Tyler Hunt

Product Manager

(219) 482-4411 Ext. 6675

Powerful ORION-60/S4 Microcomputing System. Match the degree of intelligence to the solution of your problem application. The ORION solution offers a com-

plete line of full graphic, plasma display terminals with degrees of intelligence to complete stand-alone sub-systems, all fully upward and downward compatible.

MATRIX INSTRUMENTS, INC.

Booth No. 521

230 Pegasus Avenue

Northvale, NJ 07647

Bonnie Bernstein

Director, Corporate Communications

(201) 767-1750

Matrix Instruments will exhibit its Color Graphic Camera System, which converts the output of color raster scan terminals into high-resolution photographic hard copy. Both line and continuous tone images can be produced.

The system incorporates a high-resolution, flat-faced raster scan CRT, and records single and multiple images in selectable sizes on 8" x 10" instant print film or 8" x 10" color transparency film. It also records 35mm slides, 60 image microfiche, 16mm or 35mm animation films and Polaroid SX-70 film.

The Color Graphic Camera records one, two, four, six, nine, 16 or 25 images on a single film sheet.

MEGATEK CORPORATION

Booth Nos. 440 & 540

3931 Sorrento Valley Boulevard

San Diego, CA 92121

Susan Hartwig-Hood

Manager, Marketing Communications

(714) 455-5590

Megatek Corporation manufactures the WHIZZARD 7200 Family of modular interactive graphics systems and the WHIZZARD 5000 stand-alone refresh graphics system.

Configurations support both raster and calligraphic displays. 7200 systems are available with either high-speed parallel interface or RS-232C serial communications. MEGATEK also offers TEMPLATE, a powerful device and computer independent graphics software package.

MOXON ELECTRONICS

Booth No. 427

1970 South Santa Cruz Street

Anaheim, CA 92805

Jim Jordan

President

(714) 635-7600, California Wats 800-422-4591

What's a nice rep from California doing in Seattle?

Moxon Electronics specializes in one stop shopping for Graphic Peripherals and Data Communications hardware in the California/Nevada/Hawaii territory. We are at Siggraph to meet the customers from our territory and invite you by to learn how we can help solve your problems through applications support, stock delivery installation and maintenance.

We are exhibiting equipment from Genisco (Raster graphics), Logic Systems (large plotters), Micom Systems (data transmission error controllers), Racal-Vadic (modems), Soltec (small plotters), and Summagraphics (summagrid, bit pad and Data grid II).

NICOLET CAD CORPORATION
2530 San Pablo Avenue
Berkeley, CA 94702
Jim Hurst
Marketing Manager
(415) 848-6600

Booth No. 200

Nicolet CAD Corporation specializes in comprehensive computer-aided-design (CAD) Systems. Powerful PC drafting, schematic and mechanical design software programs are combined with the hardware facilities of the Nicolet CAD systems to provide outstanding increases in accuracy and efficiency. Nicolet CAD will demonstrate its high performance color graphics display unit to Conference attendees. The presentation will emphasize the powerful properties of this computer aided design system.

NICOLET ZETA CORPORATION
2300 Stanwell Drive
Concord, CA 94520
Beverly Aquino
Marketing Coordinator
(415) 671-0600

Booth No.
200

Nicolet Zeta Corporation manufactures a complete line of high performance digital drum plotters and fast electrostatic printer/plotters. Zeta's integral, micro-computer based controllers provide rapid, cost-effective throughput by shifting a significant portion of the processing from the host CPU to the controller.

NUMONICS CORPORATION
418 Pierce Street
Lansdale, PA 19446
Phyllis H. Ulrich
Advertising Manager
(215) 362-2766

Booth No. 422

Numonics manufactures multi-function, microprocessor-based graphics digitizers and planimeters. The Numonics units offer simple solutions to complex problems in the quantifications of graphic images. Input via the manual keypad or the digitizer. Eight or sixteen digit display in either English or metric units. Choice of computer interface - IEEE488 bit parallel or EIARS232C formats. Other standard features are - 4 quadrant operation, axis rotation, trace and point-to-point output and measurements, scaling. Optional features include a library of application specific programs, automatic set-up, output image programming, event counter, incremental output and others.

DAVE NUTTING ASSOC. DIV. OF BALLY **Booth No.**
527 W. Golf Road **314**
Arlington Heights, IL 60005
Jeff Frederiksen
Vice President
(312) 956-0710

— Low-cost stand-alone interactive color 320 x 204 x 2 graphics/alphanumerics display editor using a digitizing pad or light pen.

- Graphic system/terminal running ZGRASS, an interactive high level language for Z-80 based on the GRASS language developed at the University of Illinois
- Custom development service for high volume graphics applications

OPTICAL BUSINESS MACHINES, INC. **Booth No. 621**
804 West New Haven Avenue
Melbourne, FL 32901
William E. Lohne
Marketing Representative
(305) 727-1774

Optical Business Machines, Inc. will display their Model BNY High Speed, Multi-Function Matrix Printer. This printer performs normal printer functions at 600 cps; is capable of printing in any one of up to 4 fonts; generates characters at 2, 4, and 8 times normal; and can be used for graphics as well.

PERKIN-ELMER **Booth No. 724**
2 Crescent Place
Oceanport, NJ 07757
Emily Backus
Administrator, Marketing Communications
(201) 229-6800

A leading supplier of 32 bit computer systems. Third party software packages for CAD/CAM currently available with Perkin-Elmer computer systems.

PHOENIX COMPUTER SYSTEMS, INC. **Booth No. 702**
3305 W Pinhook Rd, Suite 5
Lafayette, LA 70508
Elliott Bouillion
Director of Digital Design
(318) 234-0063

Phoenix Computer Systems, Inc. manufactures raster scan color graphic computer terminals. Phoenix introduces RASTER 256, a 256 x 240 x 3-bit pixel resolution color terminal. RASTER 256 hardware interfaces include an RS-170, RS-232, parallel printer port and an IEEE-488 communication port for test equipment. Phoenix's software includes alternate character sets, foreground and background color control, programmable user symbols and complete graphics including line and vector drawing. Phoenix offers color CRT terminal emulation packages for host computer systems using the ISC 8001G and ADM-3A protocols. Phoenix also introduces an industrial standard rack mountable video graphic communications unit with the above features.

POLAROID CORPORATION **Booth No. 800**
575 Technology Square
Cambridge MA 02139
Morris L. Samit
Marketing Manager
(617) 577-3318

Polaroid will demonstrate the application of its films to the production of instant computer graphics color hard

copy. Images displayed on color graphics CRTs will be output to Polaroid instant film by cameras manufactured by Dunn Instruments, Image Resource, and Matrix Instruments. The exhibit will feature applications in image processing, business graphics, process control, and computer art.

PRECISION VISUALS, INC.

Booth No 537

1518 Ninth Street

Boulder, CO 80302

James R. Warner, President

Nikolaus J. Kiefhaber

(303) 449-0806

PVI markets DI-3000, a machine-independent, device-independent, system of FORTRAN-callable subroutines for generating and interacting with computer graphics images. DI-3000 is based upon the 1979 GSPC "CORE" standard and runs on any computer system that supports 1966 ANSI FORTRAN (including 16-bit minis). Intelligent device drivers are available for a wide spectrum of graphics displays, including Tektronix 40xx, CalComp-compatible plotters, Hewlett-Packard, Ramtek, and other color raster systems. New device drivers are easily built from a "skeleton" device driver. High-level features include polygon fill and patterning, synchronous input, and graphic arts quality character fonts.

PRINTRONIX, INC.

Booth No. 317

17421 Derian Avenue

P.O. Box 19559

Irvine, CA 92713

Ed Winslow

Marketing Services Manager

(714) 549-7700

Printronic will be displaying its printer family of medium-speed impact printers. Designed for quality and high reliability, these line matrix printers feature 96 character ASCII sets, but are expandable to 160 characters and provide unlimited font versatility. Printronix will demonstrate the unequalled print quality from its printers, copy after copy, even on six-part forms. The full plotting and graphics capability inherent in Printronix printers will also be shown.

RAMTEK CORPORATION

Booth Nos. 616 & 632

2211 Lawson Lane

Santa Clara, CA 95050

Beverly Toms

Manager, Corporate Communications

(408) 988-2211

Ramtek Corporation will exhibit a complete line of raster scan colorgraphic computers and terminals, graphics and imaging display generators, monitors and color hard copy devices.

New products on display for the first time at Siggraph include the 6214 colorgraphic computer, programmable in PASCAL and the 4100 printer/plotter for full color hard copy graphics on plain paper.

STSC, INC.**Booth No. 326****7316 Wisconsin Avenue****Bethesda, MD 20014****David Schnebele****Director of Market Planning****(301) 657-8220**

STSC, Inc. provides either timesharing or complete stand-alone in-house software services that aid in management and planning. Such a system includes on-line data bases and tools—many of them in APL—for the analysis and display of business data. One of our tools for a successful report is to tell it in pictures using our Visions Business Graphics.

The Business Graphics product supports line, bar and pie graphs as well as word charts. The output may be directed to any popular desktop plotter or be returned as a 35mm color slide. Graphs may be generated automatically, or you may interactively compose plots or slides. Options and custom configurations are available.

SANDERS ASSOCIATES, INC.**Booth No. 228****D.W. Highway, South****Nashua, NH 03061****Arne Schumacher****Mgr., Std. Products Marketing****(603) 885-5280**

Sanders Associates, Inc. is the manufacturer of both a highly intelligent vector stroke graphics display, the Graphic, and now have added a powerful new raster Graphics display system to their display line. Sanders is featuring their recently-announced raster graphics display system offering up to 256 colors, high resolution, and dynamic operation with double buffered refresh memory. This system is upward instruction compatible with the existing Sanders Graphic 7. Sanders Model 740, a four-color beam penetration, vector stroke graphics display, displaying all colors including red at full speeds, will also be fully demonstrable.

SCIENCE ACCESSORIES CORP.**Booth No. 517****970 Kings Highway West****Southport, CT 06490****Harold A Cleveland****V.P. Sales****(203) 255-1526**

The SAC Graf/Pen devices are a family of digitizers which eliminate data tablets and are designed to convert positional information conveniently and economically. This can be done in one, two, or three dimensions, producing digital values in a form suitable for display, data processing, storage, and transmission. The more sophisticated microprocessor based models automatically perform mathematical computations previously requiring external processors or hand calculation.

An L-frame for two-dimensional systems, or a "picture frame" for three-dimensional systems, allows interaction with a variety of images, both flat and solid.

SCIENCE APPLICATIONS, INC.**Booth No. 634**

**5 Wrigley Street
Irvine, CA 92714
Phillips M. Lippincott
Assistant Vice President
(714) 951-1544**

The Computer Products Division of SAI is involved in numerous custom graphics systems development and integration. These programs include CAD/CAM, military command and control, wind tunnel instrumentation, telemetry reduction, and data acquisition applications. The host and device independent graphic support software SAIGRAPH has been developed as a FORTRAN callable subroutine library and is a compatible subset of the ACM/SIGGRAPH Core System definition.

SELANAR CORPORATION**Booth No. 318**

**2403 De La Cruz Boulevard
Santa Clara, CA 95050
Thomas M. Seitzler
Marketing Manager
(408) 727-2811**

Selanar presents VT-100 Graphics. The add-in PC card provides 1320 x 240 point viewable resolution on the VT-100's 8" x 4.5" screen. The addressable resolution is 64,000 x 64,000.

The VT-100 graphics feature is accompanied by hard-copy capability—GRAPHICS II—for the DECwriter LA36. The two devices use the same software and offer a powerful vector graphics plotting capability for less than \$2,000 add in costs.

SOLTEC CORPORATION**Booth No. 427**

**11684 Pendleton Street
Sun Valley, CA 91352
Byron G. McIntire
V.P. Sales
(213) 767-0044**

"An eight (8) Color/Eight (8) pen intelligent digital plotter is demonstrated by Soltec Corporation. The model 281 Digital Plotter has proved to be advantageous in producing multi-color, high quality, low cost hard copy of computer generated graphics."

SPATIAL DATA SYSTEMS, INC.**Booth No. 600**

**508 S. Fairview Avenue
Goleta, CA 93017
M. Stanley Schlosser
Vice President
(805) 967-2383**

Spatial Data Systems manufactures a complete line of video digitizing and display equipment for use in image processing. Capabilities include: real time digitizing of video signals, real time processing of images from our scanner for frame integration, contrast enhancement, and edge enhancement. Other products include automated measurement systems for inspection applications and full color and pseudocolor displays for applications in image understanding and analysis.

STANFORD TECHNOLOGY CORP. Booth No. 424
650 North Mary Avenue
Sunnyvale, CA 94086
M. Michael Strozza
National Sales Manager
(408) 737-0200

Stanford Technology Corp. designs, manufactures a complete line of image enhancement and analysis products, with built-in high performance hardware processing capabilities along with sophisticated software products. For use with LANDSAT, medical, radio-astronomy, non-destructive testing, graphic arts and process control.

SUMMAGRAPHICS CORPORATION Booth No. 107
35 Brentwood Avenue
Fairfield, CT 06430
Thomas J. Kinch
Vice President, Marketing
(203) 384-1344

Datagrid II — low-cost automated drafting system for creating engineering drawings, PC Boards and maps. SUMMAGRID — high accuracy, high resolution, back lighted digitizer 42" x 60" for graphic data input. BIT PAD ONE — low cost digitizer for CRT cursor control and business forms or order entry.

SUPERSET, INC. Booth No. 322
11675 Sorrento Valley Road
San Diego, CA 92121
Ian M. Hirschsohn
President
(714) 452-8665

Superset manufactures the Portable Graphics Mainframe, a 48-bit Virtual Memory processor with the power of a maxi computer. Initially designed to offload DISSPLA from host mainframes, the PGM has proven capable of handling virtually any multi-megabyte Fortran program. The full DISSPLA package is included together with INTERACT, a superior DISSPLA interactive frontend with digitizer input, full color, maps, etc. for use by non-programmers.

The PGM furnishes 29 megabytes of disk, 300 kbytes error correcting memory, 48-bit TTL processor, Intel 8080 frontend (multibus) compiler, link editor and full standalone virtual memory operating system for \$49,000 (\$35,000 quantities of 10).

SYNERCOM TECHNOLOGY, INC. Booth No. 640
500 Corporate Drive
Sugar Land, TX 77478
Bruce Allen Meyer
Manager Advertising/Public Relations
(713) 491-5000

Synercom markets turnkey interactive graphics systems INFORMAP and INFODRAFT for mapping and draft design/drafting, respectively. These systems are supported by DEC based processors including the PDP 11/34, 11/44, and 11/70 and the VAX 11/780.

Synercom's unique GWS-11 work station, new for 1980, offers a highly modular design with considerable local intelligence. The GWS-11's modular design enables it to customize to the users requirement and operate in either local or remote mode.

TALOS SYSTEMS, INC.

Booth No. 304

7419 E. Helm Drive

Scottsdale, AZ 85260

Tim Stone

Marketing Director

(602) 948-6540

Talos Systems, Inc. will be exhibiting two new digitizing tables, the Wedge and the 800 Series, at ACM SIGGRAPH '80. The Wedge features a new packaging design for the digitizer. The five degree sloped surface will enhance ease and efficiency of operation. The active surface is 11" x 11" with 400 lines per inch resolution.

The 800 Series is a flexible digitizing system with expansion capabilities which allow for dual tablets, dual cursors, and multiple interface capabilities. Electro-magnetic technology is employed with 1000 lines per inch resolution. Tablet sizes range from 12" x 12" to 44" x 60" with choice of solid, back-lighted or rear projected surfaces.

TECHNICAL MARKETING PRODUCTIONS, INC.

325 Pensylvania Avenue, S.E.

Booth No. 215

Washington, DC 20003

Joy Hertz, Vice President

Dave Wilson

(202) 547-7600

At SIGGRAPH '80, Technical Marketing Productions, Inc. presents the "computer Graphics Theatre" featuring companies with color graphics products, through the use of multi-image audio visual presentations. Included in the Theatre this year will be the DICOMED Color COM System, ISSCO's Graphics Software, the Xerox Color Graphics Printer and Applied Dynamic's Color Display. TMPI schedules the "Computer Graphics Theatre" at a number of technical expositions each year. The Company specializes in the production and presentation of multi-image audio visuals for the marketing of sophisticated computer products.

TEKTRONIX, INC.

Booth No. 334

P.O. Box 500

Beaverton, OR 97076

Ralph Show

Exhibits Manager

(503) 644-0161 Ext. 6374

Tektronix will display the 4020 Series Computer Graphics Terminals, demonstrating business analysis applications and full-color graphics; the 4050 Series Desktop Computers including the 4054 which combines extended BASIC, a 19-inch display, enhanced graphics and an optional Dynamic Graphics option; the 4016-1 Graphic Computer Terminal featuring a 25-inch display ideal for engineering design applications; the 4660 Series of intelligent B-size (A3) and C-size (A2) multicolor plotters; and the 4631 and 4632 dry process video and DVST hard copy units.

TERAK CORPORATION
14151 N. 76th Street
Scottsdale, AZ 85260
Genevieve Arnold
Manager, Administrative Services
(602) 998-4800

Booth No. 631

Stand-alone, interactive graphics computer system for education, engineering, and research. Featuring 16-Bit processor, floppy disk, raster scan graphics, writable character set, supports two operating systems, and five languages including PASCAL.

3M
3M Center (552 - 1W)
St. Paul, MN 55144
Dr. R.W. Fritts
Project Manager
(612) 778-5604

Booth No. 719

3M "SCANAMURALS" are large format full color graphics painted electronically from camera size photographic transparencies or prints. Available on paper, vinyl wallcoverings, and designer fabrics, they are ideal as custom wall murals and tapestries, accent panels, and commercial displays. 3M "SCANAMURALS", having the durability of pigmented color and rugged fabrics, provide the designer with a new and exciting environmental medium. Photography as well as artwork is reproduced by the "SCANAMURAL" process to room-sized proportions without the need for costly color separations.

THREE RIVERS COMPUTER CORPORATION

160 North Craig Street
Pittsburgh, PA 15213
Robert G. Spuntak
Sales Engineer
(412) 621-6250

Booth No. 231-A

Three Rivers Computer Corporation will be showing: PERQ, a complete single-user computer system. PERQ is all the processor, display, disk and memory one person needs, sitting at his desk. PERQ's raster scanned, 768 x 1024 resolution graphics display includes multiple font, proportionally spaced text generation. The Packet Stream Local Network interconnects PERQ systems in a distributed processing environment.

Color Graphics Display, CVD/2, produces high resolution, impeccable quality computer generated display and includes features unattainable with conventional computer graphics systems. CVD/2 is available as a peripheral to a PDP-11 or as a completely integrated business system incorporating Three Rivers' Business Graphing Language.

TRILOG, INC.
17391 Murphy Avenue
Irvine, CA 92714
Raymond Melissa
V.P. Marketing
(714) 549-4079

Booth No. 229

Trilog manufactures a line of plain-paper Raster Matrix Printer/Plotters. The COLORPLOT™ is a multi-color

printer plotter that produces up to 35 Different colors on standard fan-fold paper with a 100 x 100 dot per inch resolution. Print rate is 250 LPM.

VECTOR AUTOMATION, INC.

Booth No. 320

Village of Cross Keys

Baltimore, MD 21210

Phillip A. Adams

Vice President, Marketing

(301) 323-1212

Vector Automation, Inc. manufactures the Graphicus-80 intelligent terminal — the simplified approach to vector refresh graphics. G-CORE, a standard feature of the Graphicus-80 is a firmware implementation of the proposed SIGGRAPH CORE graphics standard providing the user tools for 2D and 3D graphics. Designed around bit-slice technology, the Graphicus -80 with its high speed performance is ideally suited for high resolution applications requiring a large number of short vectors.

VECTOR GENERAL, INC.

Booth No. 536

21300 Oxnard Street

Woodland Hills, CA 91367

Harry Tucker

Applications Engineer

(213) 346-3410

Vector General produces a wide range of calligraphic (stroke) terminals. Both on-line and off-line displays are available in state-of-the-art technology. The 3303 is the fastest 3D display on the market. The 3405 is an intelligent terminal with Writable Control Storage to aid in program development for firmware. Vector General has supplied terminals for such diverse applications as Command and Control, CAD/CAM, data analysis, simulation and structural modeling.

VERSATEC

Booth No. 306

2805 Bowers Avenue

Santa Clara, CA 95051

Pat Kelleher

Exhibits Specialist

(408) 748-3105

Visit the Versatec booth to see "Output for the 80's" from the leading manufacturer of electrostatic equipment. See a new generation of electrostatic printer/plotters quietly print 1000 lines per minute or produce quick archival quality hard copies from display terminals. See Versatec wide plotters that have become the industry standard for CAD systems produce detailed drawings.

Versatec's long line of electrostatic printer/plotters offer total output for on-line, off-line and remote applications of computer generated graphics, printout, and display hard copy. Additionally, Versatec provides electrographic supplies as well as service assistance to complete your output requirements.

Versatec is the leading manufacturer of electrostatic equipment. Let us show you why.

XEROX CORPORATION**Booth No. 210****880 Apollo Street****El Segundo, CA 90245****Richard E. Schneider, Mgr; Color Graphics Printing****Donald Berard, Mkt. Prog. Mgr,****Color Graphics Printing****(213) 615-6122**

Featuring the Xerox 6500 Color Graphics Printer for full-color hardcopy and overhead projection transparencies from digital color generating systems. See demonstration of color printer compatibility with color interactive computer terminals. Don't miss special color computer graphics theater presentation.

Color graphics — a powerful tool for management planning and decision making. Color systems with Xerox 6500 color graphics printers currently used in MIS/strategic planning, engineering/manufacturing, program management, military command/control, research, and general business/government graphics creation.

SUPPLEMENTAL LISTING**ALTEK CORPORATION****Booth No. 603****2150 Industrial Parkway****Silver Spring, MD 20904****John S. Repp****Marketing Manager****(301) 622-3906**

Altek Corporation manufactures the DATATAB^R complete line of high precision, free cursor X-Y coordinate digitizers. Altek offers both high and low accuracy digitizers in very attractive OEM and end users packages.

PRODUCT INDEX

Booth No.

CAD/CAM SYSTEMS

Bell-Northern Research	620
California Computer Products	340
Computervision Corporation	626
Control Data Corporation	533
Design Aids, Inc.	635
Digital Equipment Corp.	519
Evans & Sutherland	734
GTCO Corporation	328
Gerber Systems Technology	226
Graphic Constructions, Inc.	324
Houston Instrument	312
Logic Sciences, Inc.	209
M & S Computing, Inc.	508
Moxon Electronics	427
Perkin-Elmer	724
Ramtek Corporation	616 & 632
Synercom Technology, Inc.	640
Talos Systems, Inc.	304

CARTOGRAPHY

Comtal Corporation	637
Digital Equipment Corp.	519
Logic Sciences, Inc.	209
Ramtek Corporation	616 & 632
Superset, Inc.	322
Synercom Technology, Inc.	640
Talos Systems, Inc.	304

COM DEVICES/FILM RECORDERS

California Computer Products	340
Celco	231C
Dicomed Corporation	214
Dunn Instruments	110
Logic Sciences, Inc.	209
Ramtek Corporation	616 & 632

COMPUTER ANIMATION SYSTEMS

Apple Computer, Inc.	531
Child Incorporated	525
Digital Effects Inc.	326
Digital Equipment Corp.	519
Dunn Instruments	110
Grinnell Systems Corporation	732
Ikonas Graphics Systems, Inc.	204
Three Rivers Computer Corporation	231A

CONSULTANTS

ABW Corporation	706
Boeing Computer Services Co.	405
Child Incorporated	525
Control Data Corporation	533
Digital Effects Inc.	326
Graphic Constructions, Inc.	324
Logic Sciences, Inc.	209
Moxon Electronics	427
Technical Marketing Productions, Inc.	215

DESKTOP COMPUTERS

Apple Computer, Inc.	531
Child Incorporated	525
Chromatics, Inc.	711
Graphic Constructions, Inc.	324
Hewlett-Packard	418 & 420
Intelligent Systems Corp.	426
Magnavox Display Systems	523
Dave Nutting Assoc. Div. of Bally	314
Superset, Inc.	322
Tektronix, Inc.	334
Terak Corporation	631

GRAPHIC DIGITIZERS

Apple Computer, Inc.	531
Celco	231C
Chromatics, Inc.	711
Computervision Corporation	626
GTCO Corporation	328
Grinnell Systems Corporation	732
Hewlett-Packard	418 & 420
Logic Sciences, Inc.	209
Moxon Electronics	427
Numonics Corporation	422
Science Accessories Corp.	517
Soltec Corporation	427
Stanford Technology Corp.	424
Summagraphics Corporation	107
Talos Systems, Inc.	304

GRAPHIC DISPLAYS

ABW Corporation	706
Adage, Inc.	432
Advanced Electronics Design, Inc.	208
Apple Computer, Inc.	531
Applicon Incorporated	436
Applied Dynamics International	216
Aydin Controls	511
CEC Division/Bell & Howell	642
Child Incorporated	525
Chromatics, Inc.	711
Computervision Corporation	626
Comtal Corporation	637
Control Data Corporation	533
Cromemco, Inc.	607
Digital Engineering, Inc.	802
Digital Equipment Corp.	519
E & O Systems, Ltd.	231B
Evans & Sutherland	734
GTCO Corporation	328
Genisco Computers	645
Graphic Constructions, Inc.	324
Grinnell Systems Corporation	732
Hewlett-Packard	418 & 420
IBM Corporation	413
Ikonas Graphics Systems, Inc.	204
IMLAC Corporation	505
Intelligent Systems Corp.	426
Lexidata Corporation	220
Logic Sciences, Inc.	209
Magnavox Display Systems	523
Megatek Corporation	440 & 540
Moxon Electronics	427
Dave Nutting Assoc. Div. of Bally	314

Phoenix Computer Systems, Inc.	702
Precision Visuals, Inc.	537
Ramtek Corporation	616 & 632
Sanders Associates, Inc.	228
Selamar Corporation	318
Stanford Technology Corp.	424
Terak Corporation	631
Three Rivers Computer Corporation	231A
Vector Automation, Inc.	320
Vector General, Inc.	536

HARD COPY; PHOTOGRAPHS

Aydin Controls	511
Celco	231C
Dunn Instruments	110
Grinnell Systems Corporation	732
Image Resource Corporation	337
Matrix Instruments, Inc.	521
Polaroid Corporation	800
Ramtek Corporation	616 & 632
Tektronix, Inc.	334
Three Rivers Computer Corporation	231A

HARD COPY; SLIDES

Aydin Controls	511
Celco	231C
Dicomed Corporation	214
Digital Effects Inc.	326
Dunn Instruments	110
Hewlett-Packard	418 & 420
Image Resource Corporation	337
Matrix Instruments, Inc.	521
Ramtek Corporation	616 & 632
STSC, Inc.	326
Three Rivers Computer Corporation	231A

HARD COPY; VIDEO-PAPER

Applicon Incorporated	436
Benson-Varian	527
CEC Division/Bell & Howell	642
Computervision Corporation	626
Hewlett-Packard	418 & 420
Image Resource Corporation	337
Logic Sciences, Inc.	209
Ramtek Corporation	616 & 632
Tektronix, Inc.	334
Xerox Corporation	210

HIGH PERFORMANCE GRAPHICS PROCESSORS

Advanced Electronics Design, Inc.	208
Applied Dynamics International	216
Aydin Controls	511
Child Incorporated	525
Computervision Corporation	626
Comtal Corporation	637
Digital Equipment Corp.	519
Evans & Sutherland	734
Genisco Computers	645
Graphic Constructions, Inc.	324
Grinnell Systems Corporation	732
Ikonas Graphics Systems, Inc.	204
Lexidata Corporation	220
Logic Sciences, Inc.	209
Megatek Corporation	440 & 540

Moxon Electronics	427
Ramtek Corporation	616 & 632
Stanford Technology Corp.	424
Superset, Inc.	322
Talos Systems, Inc.	304
Tektronix, Inc.	334
Terak Corporation	631
Three Rivers Computer Corporation	231A

HIGH RESOLUTION GRAPHICS DISPLAY SYSTEMS

Adage, Inc.	432
Advanced Electronics Design, Inc.	208
Apple Computer, Inc.	531
Applied Dynamics International	216
Aydin Controls	511
Celco	231C
Child Incorporated	525
Chromatics, Inc.	711
Computervision Corporation	626
Comtal Corporation	637
Cromemco, Inc.	607
DeAnza Systems	221
Digital Equipment Corp.	519
Evans & Sutherland	734
Genisco Computers	645
Graphic Constructions, Inc.	324
Grinnell Systems Corporation	732
Ikonas Graphics Systems, Inc.	204
IMLAC Corporation	505
Lexidata Corporation	220
Logic Sciences, Inc.	209
Magnavox Display Systems	523
Megatek Corporation	440 & 540
Moxon Electronics	427
Ramtek Corporation	616 & 632
Sanders Associates, Inc.	228
Science Applications, Inc.	634
Stanford Technology Corp.	424
Summagraphics Corporation	107
Tektronix, Inc.	334
Terak Corporation	631
Three Rivers Computer Corporation	231A
Vector Automation, Inc.	320

MONITORS

Aydin Controls	511
Comtal Corporation	637
Cromemco, Inc.	607
DeAnza Systems	221
Digital Equipment Corp.	519
E & O Systems, Ltd.	231B
Electrohome Electronics	803
Genisco Computers	645
Grinnell Systems Corporation	732
Lexidata Corporation	220
Logic Sciences, Inc.	209
Moxon Electronics	427
Ramtek Corporation	616 & 632
Tektronix, Inc.	334

PLOTTERS

Appliedicon Incorporated	436
Benson-Varian	527
California Computer Products	340

Computervision Corporation	626
Graphic Constructions, Inc.	324
Hewlett-Packard	418 & 420
Houston Instrument	312
Information Devices Corporation	438
Logic Sciences, Inc.	209
Moxon Electronics	427
Nicolet Zeta Corporation	200
Selinar Corporation	318
Soltec Corporation	427
Tektronix, Inc.	334
Trilog, Inc.	229
Versatec	306

PRINTERS

Benson-Varian	527
CEC Division/Bell & Howell	642
Cromemco, Inc.	607
Digital Engineering, Inc.	802
Graphic Constructions, Inc.	324
Hewlett-Packard	418 & 420
Houston Instrument	312
IBM Corporation	413
Information Devices Corporation	438
Logic Sciences, Inc.	209
Moxon Electronics	427
Optical Business Machines, Inc.	621
Precision Visuals, Inc.	537
Printronix, Inc.	317
Ramtek Corporation	616 & 632
Selinar Corporation	318
Tektronix, Inc.	334
Trilog, Inc.	229
Versatec	306
Xerox Corporation	210

PROJECTORS

Aydin Controls	511
Electrohome Electronics	803
General Electric	213

PUBLICATIONS

The Anderson Report	316
Benwill Publishing Corp.	722
Cahners Publishing/Mini-Micro Systems	539
Computer Design	700
Computer Graphics World	615
Conference Book Service Inc.	727
The Harvard Newsletter on Computer Graphics	429
IEEE Computer Society (Computer Magazine)	529

QUANTIZER/LINE SCAN CAMERAS

Colorado Video	203
Logic Sciences, Inc.	209

SOFTWARE

Applicon Incorporated	436
Bell-Northern Research	620
Benson-Varian	527
Boeing Computer Services Co.	405
California Computer Products	340
Child Incorporated	525
Computervision Corporation	626

Control Data Corporation	533
Cromemco, Inc.	607
Design Aids, Inc.	635
Digital Effects Inc.	326
GTCO Corporation	328
Genisco Computers	645
Graphic Constructions, Inc.	324
Grinnell Systems Corporation	732
Hewlett-Packard	418 & 420
IBM Corporation	413
IMLAC Corporation	505
Information Devices Corporation	438
Integrated Software Systems Corp.	212
Logic Sciences, Inc.	209
Megatek Corporation	440 & 540
Dave Nutting Assoc. Div. of Bally	314
Precision Visuals, Inc.	537
Ramtek Corporation	616 & 632
STSC, Inc.	326
Science Applications, Inc.	634

STAND-ALONE IMAGE PROCESSORS

Apple Computer, Inc.	531
CEC Division/Bell & Howell	642
Child Incorporated	525
Colorado Video	203
Computervision Corporation	626
Comtal Corporation	637
Control Data Corporation	533
DeAnza Systems	221
Digital Equipment Corp.	519
Grinnell Systems Corporation	732
Logic Sciences, Inc.	209
Spatial Data Systems, Inc.	600
Stanford Technology Corp.	424

TABLETS

Apple Computer, Inc.	531
GTCO Corporation	328
Graphic Constructions, Inc.	324
Lexidata Corporation	220
Moxon Electronics	427
Talos Systems, Inc.	304
Tektronix, Inc.	334

VIDEO DIGITIZER & DISPLAYS

Apple Computer, Inc.	531
CEC Division/Bell & Howell	642
Colorado Video	203
Computervision Corporation	626
Comtal Corporation	637
Grinnell Systems Corporation	732
Ikonas Graphics Systems, Inc.	204
Lexidata Corporation	220
Logic Sciences, Inc.	209
Stanford Technology Corp.	424
Spatial Data Systems, Inc.	600

VIDEO DISCS

Eigen	728
-------	-----

VIDEO TAPE RECORDERS

Eigen	728
-------	-----

MISCELLANEOUS

Communications Systems

Bell-Northern Research 620

Computer Animation Production

Digital Effects Inc. 326

Computer Generated Slide Systems

Dicomed Corporation 214

Custom Graphic System

Configuration & Integration

Science Applications, Inc. 634

Custom Graphics Applications Service

Dave Nutting Assoc. Div. of Bally 314

Electrostatic Plotter/Printers

California Computer Products 340

Environmental Graphics

3M 719

Front Ends for Graphics Equipment

KMW Systems Corporation 605

Graphics Interface Software

Bell-Northern Research 620

Hard Copy

Matrix Instruments, Inc. 521

Interactive Graphics Terminals

Genisco Computers 645

Membership Information

IEEE Computer Society (Computer Magazine) 529

Microcomputer Systems

Cromemco, Inc. 607

Microfiche

Matrix Instruments, Inc. 521

Plasma Display Terminals

Magnavox Display Systems 523

16MM & 35MM Film

Matrix Instruments, Inc. 521

Technical Publications

Association for Computing Machinery 403

Time-Sharing Services

Boeing Computer Services Co. 405

Transparencies

Matrix Instruments, Inc. 521

Video Distribution & Switching Equipment

DYNALR Electronics, Inc. 614

Videoprint Systems

Image Resource Corporation 337



Sponsored by The Association for
Computing Machinery—Special Interest
Group on Computer Graphics (SIGGRAPH)

