# SIGGRAPH '87 Industry Slide Set Credits

Edited by Bruce Eric Brown

The industry slide set is composed of examples of application, products and services offered by SIGGRAPH '87 exhibitors. The images and products shown represent the very latest technology available to the computer graphics industry. Each slide is printed here in black and white to facilitate locating information about the images. The full color 35mm slides can be ordered from: ACM order department, P.O. Box 64145, Baltimore, MD 21264; 1-800-342-6626. The ACM order number for the SIGGRAPH '87 industry slide set is 915872. The cost is $30 for members; $40 for non-members.

1. Adage Inc., James H. Jackson, 531 Pylon Drive, Raleigh, NC 27606, (919) 833-5401. **Desert Terrain.** Terrain surface is generated by expanding a quadtree representation of an elevation grid. Each cell is rendered as two smooth-shaded triangles. By James H. Jackson using an experimental flight simulator on an Adage 6080.
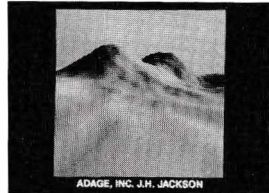

ADAGE, INC. J.H. JACKSON

2. Aerojet Techsystems Company, Donald Landy Jr., P.O. Box 13220, Sacramento, CA 95813, (916) 355-3550. **Space Systems.** Two planets and satellite by Donald Landy Jr. using the Pansophic Starburst system.
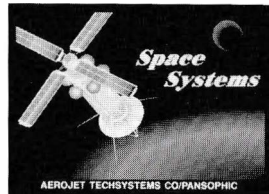
AEROJET TECHSYSTEMS CO/PANSOPHIC

3. Aerojet Techsystems Company, Donald Landy Jr., P.O. Box 13220, Sacramento, CA 95813, (916) 355-3550. **Research and Development.** Dioxide molecule on a grid by Donald Landy Jr. using the Pansophic Starburst system.
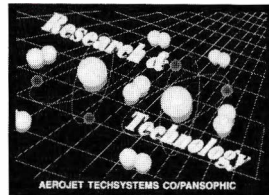
AEROJET TECHSYSTEMS CO/PANSOPHIC

4. Agraphica Design Studio, Cherry D. Simpson, 1005 Skylark St., Denton, TX 76205, (817) 566-5564. **Untitled.** Wasatch/PC 1024 presentation graphic software on an IBM XT with #9 board and Wasatch System.


AGRAPHICA CHERRY D. SIMPSON

5. Agraphica Design Studio, Larry B. Simpson, 1005 Skylark St., Denton, TX 76205, (817) 566-5564. **Space.** Wasatch/PC 1024 illustrator software on an IBM XT with #9 board and Wasatch System.

AGRAPHICA LARRY B. SIMPSON

6. Agraphica Design Studio, Larry B. Simpson, 1005 Skylark St., Denton, TX 76205, (817) 566-5564. **Mickey's Mobile,** Wasatch/PC 1024 illustrator software on an IBM XT with #9 board and Wasatch System.
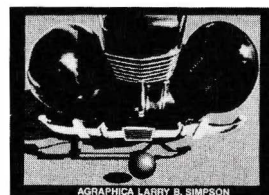
AGRAPHICA LARRY B. SIMPSON

7. Alias Research Inc., Wade Howie, 110 Richmond St. E., Ste. 504, Toronto, Ontario, Canada M5C 1P1, (416) 362-9181. Office was modeled as environment to display telecommunications products. Wood-grain, upholstery and broadloom patterns were created in paint mode and then mapped onto 3D surfaces. By Leon Soren using ALIAS/1 3D modeling and rendering with paint option on the Silicon Graphics Iris 3030 workstation.

ALIAS COURTESY LEON SOREN, MOTOROLA

8. Alias Research Inc., Wade Howie, 110 Richmond St. E., Ste. 504, Toronto, Ontario, Canada M5C 1P1, (416) 362-9181. Frame from a video sequence. The surfaces on the 3D object are generated and mapped procedurally as opposed to conventional texture mapping. Reflection mapping has been used as well. By Doug MacMillan using ALIAS/1 3D modeling and rendering with paint option on the Silicon Graphics Iris 3030 workstation.

ALIAS DOUG MACMILLAN, McGRATH & ASSOC

9. Alias Research Inc., Wade Howie, 110 Richmond St. E., Ste. 504, Toronto, Ontario, Canada M5C 1P1, (416) 362-9181. **Wrenches.** Data was transferred via IGES to ALIAS/1 system after finite element analysis on Patran. Procedural reflectance map was applied on the ALIAS/1 to give the wrench the metallic effect. By Peter Liepa using Patran from PDA Engineering and the ALIAS/1 rendering on the Silicon Graphics Iris 3030 workstation.
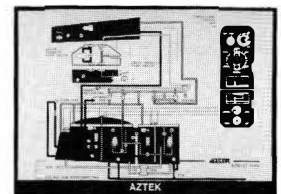

ALIAS RESEARCH INC. PETER LIEPA

10. Aztek, Patsy Miller, 17 Thomas, Irvine, CA 92718, (714) 770-8406, **Untitled.**
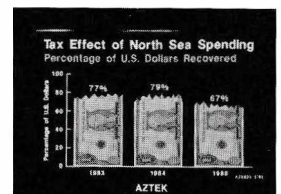

AZTEK

11. Aztek, Patsy Miller, 17 Thomas, Irvine, CA 92718, (714) 770-8406, **Untitled.**

AZTEK

12. Aztek, Patsy Miller, 17 Thomas, Irvine, CA 92718, (714) 770-8406, **Untitled.**

Tax Effect of North Sea Spending
Percentage of U.S. Dollars Recovered
AZTEK

13. BTS (Bosch), Al Jensen, 2300 South 2300 West, Salt Lake City, UT 84119, (801) 972-8000. **Untitled.**

BTS COMPUTER ART AND ANIMATION

14. BTS (Bosch), Al Jensen, 2300 South 2300 West, Salt Lake City, UT 84119, (801) 972-8000. **Untitled.**


BTS OPTIMUS

15. BTS (Bosch), Al Jensen, 2300 South 2300 West, Salt Lake City, UT 84119, (801) 972-8000. **Untitled.**


BTS OPTIMUS
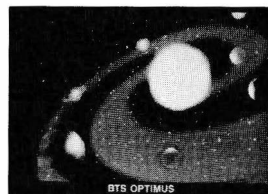
16. Chromatics Inc., Peggy Grimm, 2558 Mtn. Ind. Blvd., Tucker, GA 30084, (404) 493-7000. **Chromatics CX1536 Display System.** Slide of the system with CAD/CAM application by Jim Squires on the Color-graphic™ CX1526.

CHROMATICS INC. JIM SQUIRES
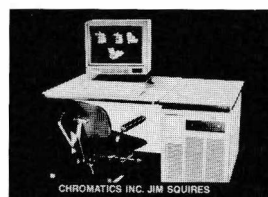
17. Chromatics Inc., Peggy Grimm, 2558 Mtn. Ind. Blvd., Tucker, GA 30084, (404) 493-7000. **Radar.** Slide of the system with US radar simulation by Jim Squires on the Colorgraphic™ CX1526 using GKS Level 2C software.

CHROMATICS INC. JIM SQUIRES
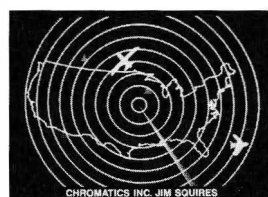
18. Chromatics Inc., Peggy Grimm, 2558 Mtn. Ind. Blvd., Tucker, GA 30084, (404) 493-7000. **PC Board.** Slide of the system with PC board layout (each circuit layer is a different color) by Bob Felts on the Colorgraphic™ CX1526 using GKS Level 2C software.

CHROMATICS INC.
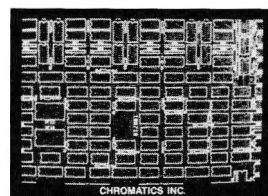
19. Cray Research Inc., William Porter, 1333 Northland Drive, Mendota Heights, MN 55120, (612) 681-3673. **Seymour Cray and the Cray-2 Supercomputer.** The CRAY-2 supercomputer is pictured with its designer Seymour Cray. The CRAY-2 computer system is the largest, most powerful configuration available today. It contains a large common memory of 128 MWords or 256 MWords (64 bit words) with 2 or 4 background processors, a clock


CRAY, SEYMOUR CRAY & CRAY-2

cycle of 4.1 nanoseconds and is cooled by an inert fluorocarbon liquid. The CRAY-2 mainframe stands 45 inches high and is 53 inches in diameter. The UNICOS operating system for the CRAY-2 computer system is based on AT&T's UNIX System V.

20. David Sarnoff Research Center, Douglas Dixon, CN 5300, Princeton, NJ 08543, (609) 734-3176. **Digital Video Interactive System.** DVI development system, with IBM PC/AT, development video board and CD-ROM player. On the screen is a motion sequence of the Golden Gate Bridge.


DVI/© 1987 RCA CORP.

21. David Sarnoff Research Center, Douglas Dixon, CN 5300, Princeton, NJ 08543 (609) 734-3176. **DVI Design and Decorate.** View of a furnished room with 3-D mapped textures from Design and Decorate, a DVI pilot application developed jointly with Videodisc Publishing Inc. Programmed by Alex Benenson on the DVI development system.

DVI/© 1987 RCA CORP. & VPI INC.
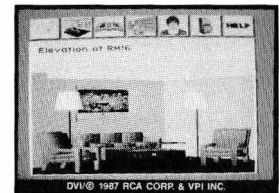
22. Dicomed Corp., Kathy Blake, 12000 Portland Ave S, Burnsville, MN 55337, (612) 885-3000. **Audio Visual Communications Cover.** To commemorate the 25th year of Audio Visual Communications, Bruce Lindbloom and Mike Newman coined the front cover image. It represents a combination of advanced computer graphic rendering techniques. Realistic clouds were created using Dicomed paint program while 3-D bi-cubic patches composed the rolling hills, along with fractal color mapping for texture. An object-based system enabled the coin design, and bump mapping produced the embossed effect. Light sourcing added highlights, shadows and reflective traits. Dicomed hardware and software were used to produce the image.

DICOMED CORP M. NEWMAN/B. LINDBLOOM
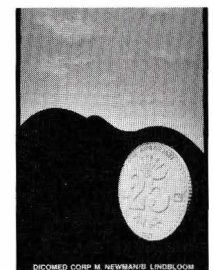
23. Eikonix Corp (A Kodak Company), Virginia Small, 23 Crosby Drive, Bedford, MA 01730, (617) 275-5070. **EIKONIX 1000 Digital Scanner.** The EIKONIX 1000 digital imaging camera is a self-contained monochrome 4K × 4K camera system which automatically performs self-diagnostics at power-up. An LED display monitors exposure control and camera status.

EIKONIX®1000 DIGITAL SCANNER
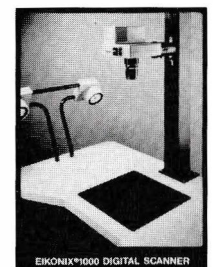
24. Evans and Sutherland, 580 Arapeen Drive, Salt Lake City, UT 84115, (801) 582-5847. **Goodyear Blimp.** Produced on the E&S CT-6 real time simulator.

EVANS & SUTHERLAND/GOODYEAR AEROSPACE

25. Evans and Sutherland, 580 Arapeen Drive, Salt Lake City, UT 84115, (801) 582-5847. **Shuttle Landing.** Produced on the E&S CT-6 real time simulator.


EVANS & SUTHERLAND/NASA

26. Genigraphics Corp., Douglas P. Whitehouse, 4806 West Taft Road, Liverpool, NY 13088, (315) 451-6600. **Porche.** Side view of a porche produced by Douglas P. Whitehouse using Extended Artwork software on the Genigraphics SG1 workstation.

GENIGRAPHICS/DOUGLAS P. WHITEHOUSE

27. Genigraphics Corp., Timothy J. Marker, 4806 West Taft Road, Liverpool, NY 13088, (315) 451-6600. **Susan.** Woman striking a seductive pose with a hat on by Timothy J. Marker using Extended Artwork software on the Genigraphics 100D+ workstation. The slide was imaged on a Genigraphics Materpiece 8770.

GENIGRAPHICS/TIMOTHY J. MARKER

28. Genigraphics Corp., Thomas Gilhooly, 4806 West Taft Road, Liverpool, NY 13088, (315) 451-6600. **Fish #1.** Yellow magenta fish by Thomas Gilhooly using Extended Artwork software on the Genigraphics SG1 workstation. The slide was imaged on a Genigraphics Materpiece 8770.


GENIGRAPHICS/THOMAS GILHOOLY
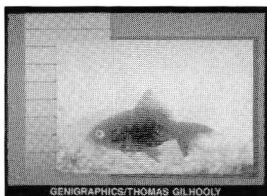
29. GTCO Corporation, Laura Fadden, 7125 Riverwood Drive, Columbia, MD 21046, (301) 381-6688. **2020 Rear Projection Digitizer.**

GTCO CORP. 2020 REAR PROJECTION DIGITIZER

30. GTCO Corporation, Laura Fadden, 7125 Riverwood Drive, Columbia, MD 21046, (301) 381-6688. **Autoplot Flat Bed Plotter.**


GTCO CORP. AUTOPLOT FLAT BED PLOTTER
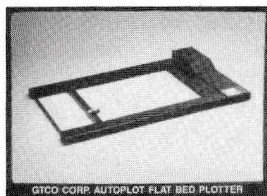
31. GTCO Corporation, Laura Fadden, 7125 Riverwood Drive, Columbia, MD 21046, (301) 381-6688. **Macintizer.**

GTCO CORP. MACINTIZER
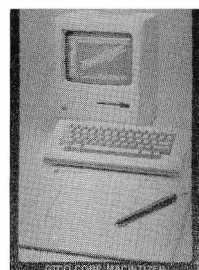
32. Houston Instruments/ Ametek, Marty McConnell, 8500 Cameron Road, Austin, TX 78753, (512) 835-0900. **Scan-Cad.**


HOUSTON INSTRUMENTS—SCAN-CAD

33. Houston Instruments/ Ametek, Marty McConnell, 8500 Cameron Road, Austin, TX 78753, (512) 835-0900. **Graphics Plotter.**

HOUSTON INSTRUMENTS—GRAPHICS PLOTTER
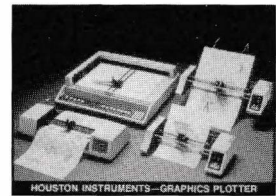
34. Houston Instruments/ Ametek, Marty McConnell, 8500 Cameron Road, Austin, TX 78753, (512) 835-0900. **Trud Grid Digitizers.**

HOUSTON INSTRUMENTS—TRUE GRID DIGITIZERS
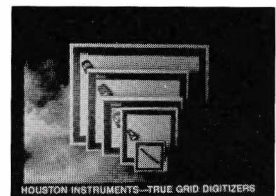
35. Intelligent Light, Jeanne Mara, P.O. Box 65, Fairlawn, NJ 07410, (201) 794-7750. **Notes.** Shiny black notes that have an insect-like feel, sitting on fat tubular musical staffs that cast soft shadows below. Produced with Intelligent Light software running on Intelligent Light GW-3000 workstations, Apollo workstations, Ikonas frame buffer and Dunn 632 frame recorder.

© 1987 INTELLIGENT LIGHT JEANNE MARA
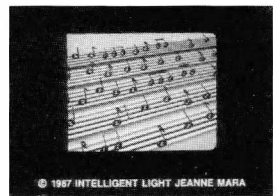
36. Intelligent Light, John Chekan, P.O. Box 65, Fairlawn, NJ 07410, (201) 794-7750. **On Worms.** Detailed texture model of directors chair, with potted plant and reflective texture base. Produced with Intelligent Light software running on Intelligent Light GW-3000 workstations, Apollo workstations, Ikonas frame buffer and Dunn 632 frame recorder.

© 1987 INTELLIGENT LIGHT JOHN CHEKAN

37. Intelligent Light, Don Leich, P.O. Box 65, Fairlawn, NJ 07410, (201) 794-7750. **Trumpet.** Trumpet model created for HBO's "Cinemax Sessions" with Phong shading and multiple light sources. Produced with Intelligent Light software running on Intelligent Light GW-3000 workstations, Apollo workstations, Ikonas frame buffer and Dunn 632 frame recorder.


© 1987 INTELLIGENT LIGHT DON LEICH

38. Lasergraphics, H. B. Demetresa, 17671 Cowan Ave., Irvine, CA 92714, (714) 660-9497. **MFR Product Shot.** A complete system for generating high resolution 6000-line film output using virtually any of today's popular graphics software packages at the rate of 20 slides per hour. Incorporated in the MFR is the powerful Rascoll III, a Motorola 68000 based rasterizing microcomputer and the MFR digital camera.
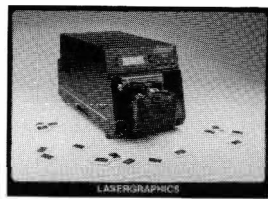
39. Lasergraphics, H. B. Demetresa, 17671 Cowan Ave., Irvine, CA 92714, (714) 660-9497. **Arrow and Diver.** Produced using West End film software on the MFR hardware.
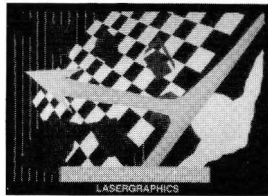
40. Lazerus, Joanne Culver, 2821 Ninth St., Berkeley, CA 94170, (415) 845-1237. **Animega/ S.** Example of hierarchical databases, multiple texture-mapped, mixed modes with 24 colored lights on the Lazerus Animega/S system.
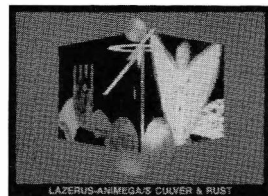
41. Pansophic Systems, Inc., Michael Hunt, 709 Enterprise Drive, Oak Brook, IL 60521, (312) 572-6000. **Pretty in Pink.** Produced by Ken Braswell using Pansophic's Starburst system running on the IBM PC/AT.
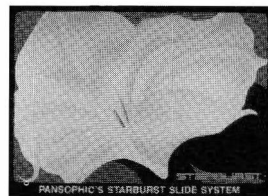
42. Pansophic Systems, Inc., Michael Hunt, 709 Enterprise Drive, Oak Brook, IL 60521, (312) 572-6000. **Transit Trends.** Produced by Ken Braswell using Pansophic's Starburst system running on the IBM PC/AT.
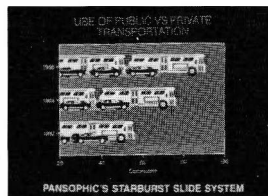
43. Pansophic Systems, Inc., Michael Hunt, 709 Enterprise Drive, Oak Brook, IL 60521, (312) 572-6000. **Interplanetary Crafts.** Produced by Ken Braswell using Pansophic's Starburst system running on the IBM PC/AT.
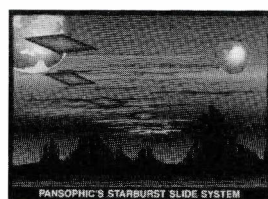
44. PictureWare Inc., Lori Martin, 111 N. Presidential Blvd., Bala Cynwyd, PA 19004, (215) 667-0880. **Security.** A photo data base formatted for a security identification application. The software used was Picture Power running on an IBM PC/AT with JVC video cameras and the AT&T Targa 16 board.

45. PictureWare Inc., Lori Martin, 111 N. Presidential Blvd., Bala Cynwyd, PA 19004, (215) 667-0880. **Workstation.** A typical workstation using Picture Power to maintain personnel records. The hardware is an IBM PC/AT with JVC video cameras, Sony monitor and the AT&T Targa 16 board.

46. Pixar, Lisa MacKenzie, P.O. Box 13719, San Rafael, CA 94913, (415) 499-3600. **Red's Dream.** Frame from the computer animated film, "Red's Dream." Produced by the Pixar Animation Production Group using proprietary modeling and animation software and ChapReyes Image Synthesis Package. Modeling and animation: Evans & Sutherland PS350 and CCI Power 6/32. Rendering: Pixar Image Computer.

47. Pixar, Lisa MacKenzie, P.O. Box 13719, San Rafael, CA 94913, (415) 499-3600. **Red's Dream.** Frame from the computer animated film, "Red's Dream." produced by the Pixar Animation Production Group using proprietary modeling and animation software and ChapReyes Image Synthesis Package. Modeling and animation: Evans & Sutherland PS350 and CCI Power 6/32. Rendering: Pixar Image Computer.
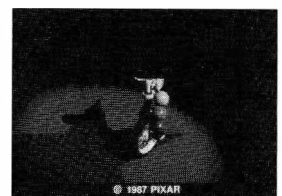
48. RGB Computer Graphics, Tullia Redaelli Spreafico, s.r.l., Viale Piave, 17 20129 Milano Italia 02/793-233. **Tiger.** High resolution picture for promotional use made by Caterina de Vita with the Lumena 8 software and the Revolution 512 hardware.
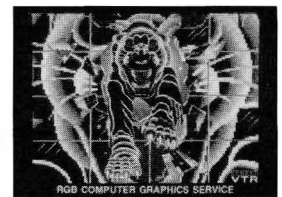
49. RGB Computer Graphics, Tullia Redaelli Spreafico, s.r.l., Viale Piave, 17 20129 Milano Italia 02/793-233. **Auto.** Demonstration picture with metal effects made by Gabriella Monti with the Lumena 8 software and the Revolution 512 hardware.
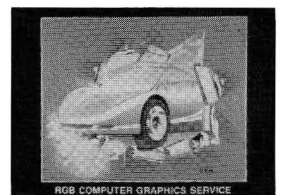
50. RGB Computer Graphics, Tullia Redaelli Spreafico, s.r.l., Viale Piave, 17 20129 Milano Italia 02/793-233. **Bobby.** Picture for RGB Depliant made by Massimo Ontani with the Lumena 8 software and the Revolution 512 hardware.
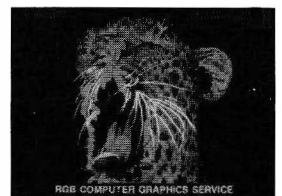
51. SESA, Emmanuel Cordonnier, Zirst Atalante, 3 rue du Clos Courtel BP 1897, 35018 Rennes Cedex France (33) 99 63 50 50. **Liliacees.** The 3D objects have been automatically calculated by AMAP from a few hundred parameters, thanks to the growth engine developed by CIRAD (Philippe de Reffye) and included in AMAP. AMAP is advanced modeling for architecture of plants and was used with preview and image from Wavefront Technologies Inc. on an Iris 3030 workstation to produce the images.


SESA—LILIACEES MODELED WITH AMAP

52. SESA, Emmanuel Cordonnier, Zirst Atalante, 3 rue du Clos Courtel BP 1897, 35018 Rennes Cedex France (33) 99 63 50 50. **Cherry Tree.** The 3D objects have been automatically calculated by AMAP from a few hundred parameters, thanks to the growth engine developed by CIRAD (Philippe de Reffye) and included in AMAP. AMAP is advanced modeling for architecture of plants and was used with preview and image from Wavefront Technologies Inc. on an Iris 3030 workstation to produce the images.


SESA—CHERRY TREE MODELLED WITH AMAP
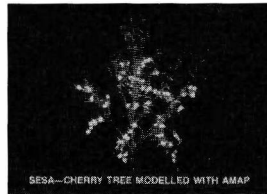
53. Silicon Graphics Inc., Gail Madison, 2011 Stierlin Road, Mountain View, CA 94043, (415) 962-3354. **Iris 4D/60.** Software by Neo-Visuals, Inc. running on the Iris 4D/60 from Silicon Graphics.


SILICON GRAPHICS INC./NEO-VISUALS

54. Silicon Graphics Inc., Gail Madison, 2011 Stierlin Road, Mountain View, CA 94043, (415) 962-3354. **Untitled.** Software by Vertigo Systems International, V-2000, running on the Iris 3030 from Silicon Graphics.


SILICON GRAPHICS INC./VERTIGO
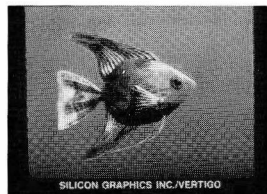
55. Silicon Graphics Inc., Gail Madison, 2011 Stierlin Road, Mountain View, CA 94043, (415) 962-3354. **Untitled.** Software by Alias Research, running on the Iris 3100 from Silicon Graphics.


SILICON GRAPHICS INC./ALIAS
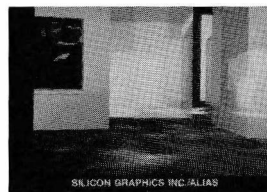
56. Summagraphics Corporation, Susan Burns, 777 State Street Ext., Fairfield, CT 06430, (203) 384-1344. **SummaSketch (Horizon Shot).** SummaSketch is a graphics tablet which is used in applications such as desktop publishing, graphic arts, presentation graphics and CAD/CAM/CAE workstations. Image by Nick Zaulishin.

SUMMAGRAPHICS-SUMMASKETCH TABLET
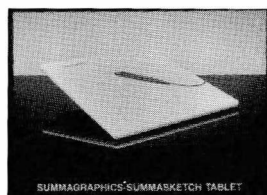
57. Summagraphics Corporation, Susan Burns, 777 State Street Ext., Fairfield, CT 06430, (203) 384-1344. **Untitled.** Summa-Mouse is an electrical/optical solid state mouse and is compatible with over 200 software programs. Image by Nick Zaulishin.


SUMMAGRAPHICS-SUMMAMOUSE
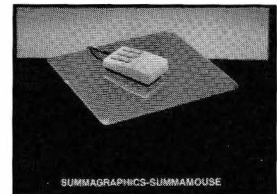
58. Summagraphics Corporation, Susan Burns, 777 State Street Ext., Fairfield, CT 06430, (203) 384-1344. **Untitled.** Microgrid II is a high accuracy graphic tablet for PC based workstations and major CAD, CAM and CAE systems. Image by Nick Zaulishin.

SUMMAGRAPHICS-MICROGRID II TABLET
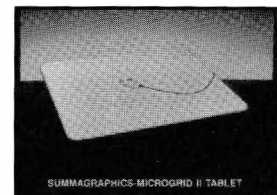
59. TDI, 22 rue Hegesippe Moreau, 75018 Paris France (1) 43875858. **CIO.** Olympic rings logo animation for the International Olympic Committee. Produced by TDI/Pascal Bap and Roger Roozat Telvetia using TDI software on a Gould System 32/9780.


TDI

60. Trancept Systems Inc., Phyllis F. Flynn, 521 Uwharrie Ct., Raleigh, NC 27606-1456, (919) 828-7406. **TAAC-1.** The TAAC I features 8 MB of local memory, 1024 × 1024 × 60 Hz non-interlaced video and is connected to the Sun computer workstation.
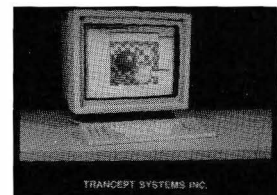
TRANCEPT SYSTEMS INC.

61. Versacad Corp., Scott Harlin, 7372 Prince Drive, Huntington Beach, CA 92647, (714) 847-9960. **Untitled.** Created from VersaCAD DESIGN software system which integrates 2D drafting, 3D surface and solids modeling, bill of materials, presentation graphic output and complete programmability.

VERSACAD CORP.

62. Versacad Corp., Scott Harlin, 7372 Prince Drive, Huntington Beach, CA 92647, (714) 847-9960. **Untitled.** Created from VersaCAD DESIGN software system which integrates 2D drafting, 3D surface and solids modeling, bill of materials, presentation graphic output and complete programmability.
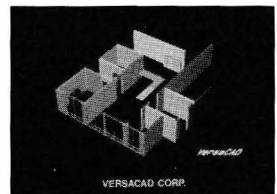
VERSACAD CORP.

63. Versacad Corp., Scott Harlin, 7372 Prince Drive, Huntington Beach, CA 92647, (714) 847-9960. **Untitled.** Created from VersaCAD DESIGN software system which integrates 2D drafting, 3D surface and solids modeling, bill of materials, presentation graphic output and complete programmability.
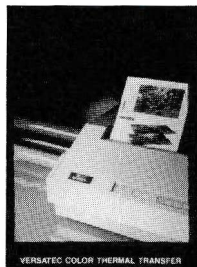

VERSACAD CORP.

64. Versatec, A Xerox Company, Pamela Simmons, 2710 Walsh Ave., Santa Clara, CA 95051, (408) 988-2800. **Versatec Spectrum.** Versatec Spectrum is an 11-inch wide electrostatic color plotter. It acts as three output devices; printer, plotter and CRT hardcopy. Output is an A or B size. When used with Versatec software, the user can take advantage of 256 predefined and 256 user defined colors.

VERSATEC SPECTRUM ELECTROSTATIC

65. Versatec, A Xerox Company, Pamela Simmons, 2710 Walsh Ave., Santa Clara, CA 95051, (408) 988-2800. **Versatec Versacolor.** Versatec Versacolor thermal transfer color plotter offers the fastest speed and highest resolution of any other plotter in its price range. An A-size color

VERSATEC COLOR THERMAL TRANSFER

plot is produced in 45 seconds, B-size in 60 seconds. The resolution is 300 dpi. Monochrome A-size in 15 seconds and B-size in 20 seconds.

66. Versatec, A Xerox Company, Pamela Simmons, 2710 Walsh Ave., Santa Clara, CA 95051, (408) 988-2800. **Versatec CE 3000 Series.** Versatec CE 3000 wide format electrostatic color plotters offer the user a choice of width and resolutions. Models are available in 24, 36

VERSATEC ELECTROSTATIC

and 44-inch widths, resolution is either 200 ppi or 400 ppi. When used with Versatec software, the user can take advantage of 256 predefined and 256 user defined colors.
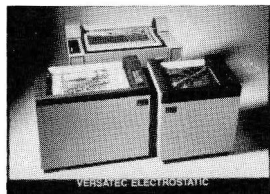
67. Vision 3D, M. Brunet, Le Prologue 31328, Laberge Innopole France 33 61 24 12 20. **3D Videolaser.** 3D digitizing system based upon laser triangulation.


VISION 3D DIGITIZING SYSTEM

68. Vision 3D, M. Brunet, Le Prologue 31328, Laberge Innopole France 33 61 24 12 20. **3D Videolaser.** Using Videolaser to digitize a shoe in a few seconds.


VISION 3D DIGITIZING A SHOE
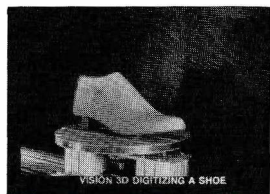
69. Vision 3D, M. Brunet, Le Prologue 31328, Laberge Innopole France 33 61 24 12 20. **3D Videolaser.** Synthetic image obtained with the shoe on a Cubi-7 machine.


VISION 3D SYNTHETIC SHOE
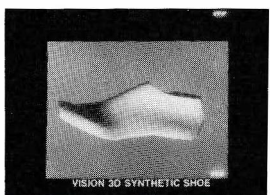
70. Wasatch Computer Technology, Brian Johnson, 123 East 200 South, Salt Lake City, UT 84111, (801) 575-8043. **Joker.** Wasatch PC 1024 illustration system, PC 4096 presentation system and a 3D solid modeling program were used to create the image on an IBM PC.


WASATCH COMPUTER TECH. BRIAN JOHNSON
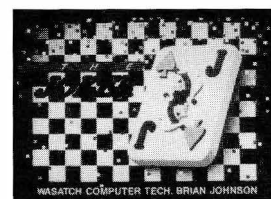
71. Wasatch Computer Technology, Brian Johnson, 123 East 200 South, Salt Lake City, UT 84111, (801) 575-8043. **Cardinal.** Wasatch PC 1024 illustration system, PC 4096 presentation system and a 3D solid modeling program were used to create the image on an IBM PC.

WASATCH COMPUTER TECH. BRIAN JOHNSON
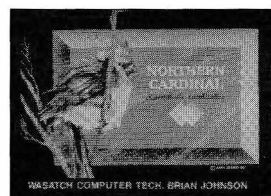
72. Wavefront Technologies, Larry Schnur, 530 East Montecito Street, Santa Barbara, CA 93103, (805) 962-8117. **Lights Camera Action.** Frame from the trailer of the Santa Barbara Film Festival. Design and construction: John Grower.

WAVEFRONT TECHNOLOGIES INC.
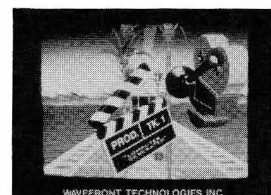
73. Wavefront Technologies, Larry Schnur, 530 East Montecito Street, Santa Barbara, CA 93103, (805) 962-8117. **Flamingo.** Three dimensional image modeled on Iris 3130. Textures mapped onto 3D shapes using Wavefront Image software. Design and construction: John Grower. Textures: Bruce Jones.

WAVEFRONT TECHNOLOGIES INC.
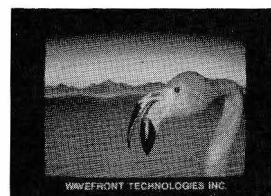
74. Wavefront Technologies, Larry Schnur, 530 East Montecito Street, Santa Barbara, CA 93103, (805) 962-8117. **Moosesavers.**

WAVEFRONT TECHNOLOGIES INC.