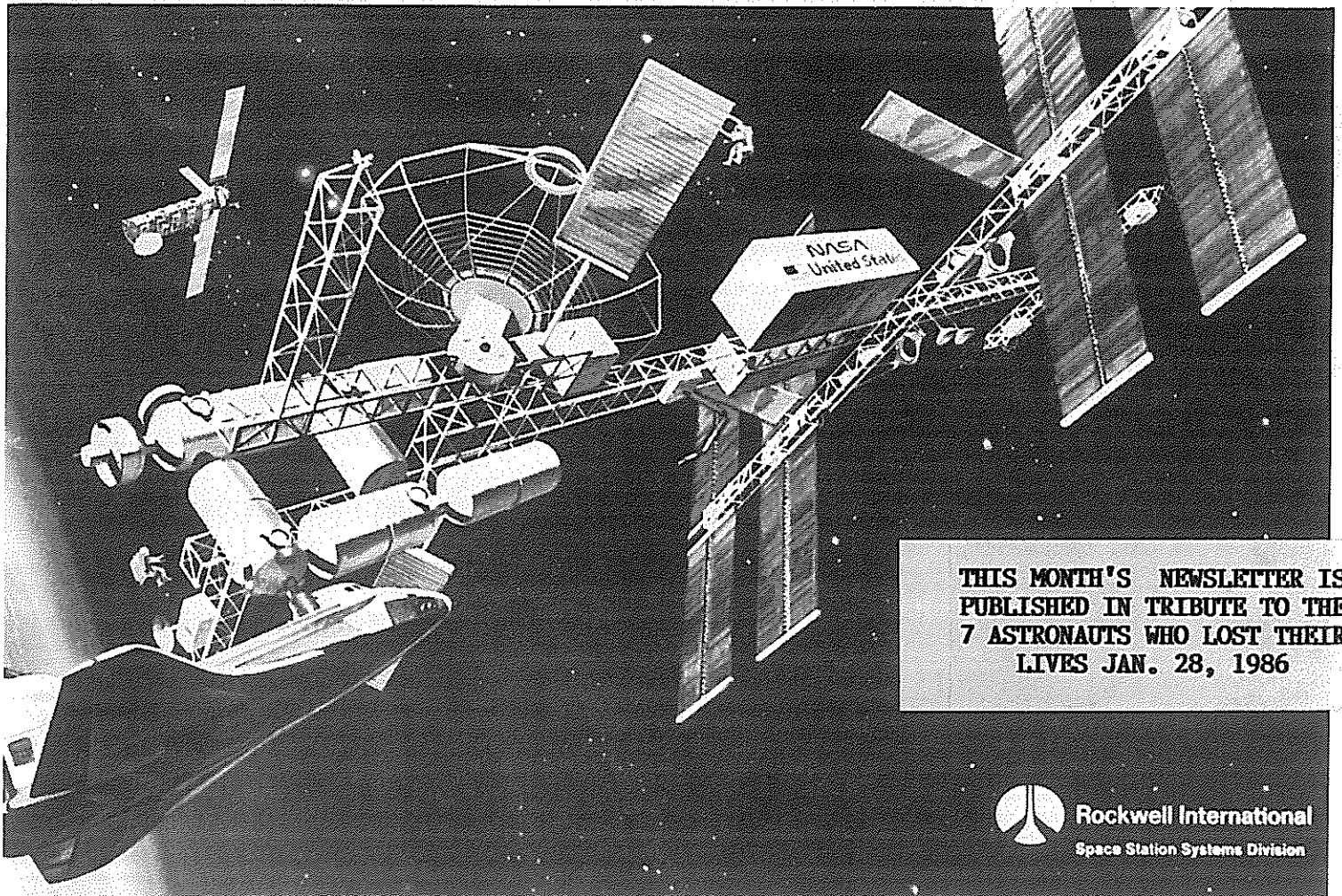# SIGGRAPH-L

FEBRUARY 11th MEETING:

Rockwell International

Space Station Systems Division

The future will be at hand for our February 11th meeting. Representatives of Rockwell International, Space Station Systems Division, will discuss the company's activities and goals in the development of the Space Station. Because the meeting will be held at Rockwell's Downey facility, **ALL FOREIGN NATIONALS MUST**

LEAVE THE FOLLOWING INFORMATION ON THE SIGPHONE, (213) 392-1074, BY MONDAY, FEBRUARY 3RD: name; who you are representing (a company or yourself); where you are from (citizenship); Green Card number, if you have one.

THIS MONTH'S NEWSLETTER IS PUBLISHED IN TRIBUTE TO THE 7 ASTRONAUTS WHO LOST THEIR LIVES JAN. 28, 1986

Rockwell International
Space Station Systems Division

Rockwell International
Space Station Systems Division

ROCKWELL MEETING CONTINUED:

The meeting will be held at Rockwell International at 7:30 pm (social hour begins at 6:30 pm), SEE THE MAP ON THE LAST PAGE. $1.00 for members, $3.00 for nonmembers. Please try to bring correct change.

Steven Tice, Manager of Advanced Design Simulation Graphics, will speak; along with his associate, Greg Panos. Our Meeting Agenda will include:

- Unhindered access to full size mockups of a Space Station module, the Space Shuttle, the Orbiter and the Apollo capsule. This will occur during the refreshment hour (6:30-7:30 pm), so come early!
- Hands-on demonstration of the GTI Poly 2000, with GTI representatives available for questions.
- Actual space flight footage.
- Real-time computer graphics display of Rockwell's CDAS software, projected with large screen video.
- Etc., etc., etc.

In 1983, President Reagan called for international participation in the construction of a permanent, manned space station. He initiated an $8 billion program, to be carried out in four phases, A-D. Four NASA sites are responsible for development of different aspects of the Space Station:

- Johnson Space Center - Station Structure Design.
- Marshall Space Flight Center - Common Module Development.
- Goddard Space Flight Center - Space Station User's Design.
- Lewis Research Center - Electrical Power Option Research.

Rockwell won Johnson Space Center's $30 million Phase B Station Structure Design contract, after a stiff competition with Lockheed and McDonnell Douglas. Phase B is the basic planning stage, required before actual manufacture of the Space Station begins. Rockwell has developed a special software package to perform rapid preliminary design analysis and graphics simulations of the Space Station and its operations. This is called CDAS (Configuration Design Analysis Simulation Software). CDAS uses a GTI Poly 2000 for its real-time display simulation. The GTI system is capable of 30 frame/sec. display of color-shaded graphics components. Having created a 3-D

Space Station model on the GTI, Rockwell personnel can manipulate the model in real- time, making design decisions quickly and efficiently.

The station is of modular construction, allowing for flexibility and additions to the vehicle to meet evolving mission needs thru the rest of this century, and into the next. The modules will be carried in the Space Shuttle payload bay, for assembly in orbit. Completion time for the station is slated for the early 1990's.

A number of goals will be fulfilled by the Space Station, including:

- Permanent laboratory for science, technology and the commercialization of space.
- Facility to service space vehicles, satellites and other systems.
- Staging point for missions to the moon and planets.
- Assembly site for large space structures.

The Space Station will greatly enhance our capability to use space for the improvement of life below. Space offers great resources of energy and a unique environment. The full extent of these resources, & how they might be used, are not clear today. It is possible that industrialization might expand into space, without an unpleasant impact on the Earth's environment. However, the potential of space must not detract from efforts to conserve terrestrial resources and improve the quality of life on Earth. NANCY COLLIER.
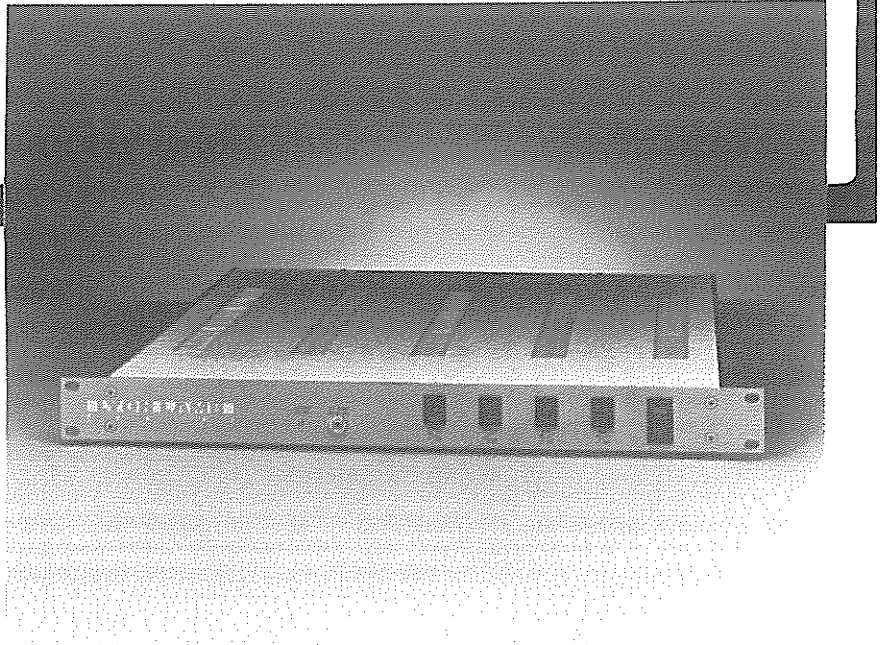
INDUSTRY NOTES

>>>>>> ENCODER / CONTROLLERS MAKE <<<<<<
>>> COMPUTER GRAPHICS RECORDING POSIBLE <<<

Anyone who watches TV i.d. logos and commer-
cials, or has had the opportunity to see the
Film and Video Show at the national SIGGRAPH
convention, knows the impact of computer
graphic animation. However, not so obvious
is the process for the transfer of computer
rendered images to a display medium, such as
video tape or 35mm film. The RGB output must
be converted to a format suitable for the
recording hardware. Also, due to rendering
times of one to several minutes per frame,
one second of animation can take more than an
hour to record. As a result, automatic con-
trol of the computer output and the recording
equipment is a necessity.

Lyon Lamb, a local company, is a leader in
this technology, manufacturing animation con-
trollers, such as the VAS IV, VAS V and VAS-
Delta, which interface with the computer.
These devices capture the image as RGB out-
put, convert it electronically to the proper
format for recording, and operate the video
tape recorder – one frame at a time – without
operator supervision.

Lyon Lamb is now introducing a powerful new
product: the ENC-VI RGB to NTSC (or PAL)
color video encoder / sync generator. The
ENC-VI is an advanced color encoder designed
for broadcast and computer graphics appli-
cations. The new product outputs both compo-
site and component video from RGB sources,
either with or without genlock (which pro-
vides synchronization with other video sour-
ces); providing unprecedented image quality.

Features of the new device include internal
sync generator with standard outputs (com-
posite sync, blanking, burst flag, sub-car-
rier, horizontal and vertical drive), as well
as separate color bar and black burst genera-
tor. For slave genlock, the ENC-VI accepts
separate sync "in" or sync on Green (of RGB)
and sub-carrier "in," providing color-framed
genlock with 360 degree phase adjustment.
Outputs include RS-170A composite video (or
optional PAL composite) and R-Y, B-Y and Y +
sync format component video for use with Sony
Betacam video systems.

Lyon Lamb's new encoder / sync generator is a cost-effective,
high performance addition to Lyon Lamb's growing family of
products. Interviews with many users of Lyon Lamb's products,
such as Universal Studio's Computer Graphics Department, have
left me with the impression that this company produces top
quality products of great reliability. Contact Gary Hooks at
(818) 843-4831 for information. RANDY RANDALL.

Betacam is a registered trademark of the Sony Corporation.

>>>>> SIGGRAPH '86 PLANNING KIT <<<<<

Want the cheapest ticket to SIGGRAPH '86? The best hotels? The
least expensive? The vast LA SIGGRAPH News Network has sent a
reporter to Dallas, and we have the goods. We have also con-
tacted well respected travel agents, who will arrange discounts
for group bookings. This does not mean we all have to pack like
sardines onto Deadly Air and Fried Chicken Charter. If you are
interested in information on air travel, car pooling, plane
pooling, hotels, Dallas car or lomo rentals, restaurants & "hot
spots," or Dallas dress codes & culture —— we have it all!

For info, you may write to RANDY RANDALL, Editor, LA SIGGRAPH
Newsletter, 9703 Washington Blvd, Culver City, CA 90232. Please
indicate the dates and mode of travel you are interested in, and
a brief description of your needs in Dallas.

Info will also be available at the February meeting. Volunteer
work, and other details, will be forthcoming in future issues.

>>>>> SPACE PROGRAM TRAGEDY <<<<<

As editor of the LA SIGGRAPH Newsletter, I am sure I speak for
all of us in my expression of sorrow over the recent accident.
Many of us have worked on the program, or have friends & rela-
tives who do. You can express your support by writing to Astro-
naut Office, NASA, Johnson Space Center, CB / Houston, TX 77058.

ANNOUNCEMENTS

>>>>> FILM FOR SIGGRAPH '86 <<<<<

Kinetic Vision Systems is looking for artists interested in doing voluntary work on a film for the SIGGRAPH '86 annual conference. Call (714) 893-4944 for information.

>> COMET - HALLEY ART SHOW & COMPETITION <<

Michael D. Zorn and Edie O'Neil are inviting computer graphics artists to submit entries in a mixed media art show and competition. All worth while entries will be displayed & receive a Certificate of Participation. Flat art, as well as video, will be exhibited April 19-20, at the Oranges / Sardines (gallery), 320 S. Omar Ave. in Los Angeles. The theme is "Cometary / Planetary Earth Space," and the deadline for entries is March 31st. Entry fee: $10.00. The show will be open to the public, at no charge. According to Edie, "Some very interesting projects are being done for this show. Please join us for a once in a lifetime unique experience." For more info, write to 360-D Carriage Dr., Santa Ana, CA 92707; or call (714) 549-4963. Collect calls will be accepted for serious inquiries.

>>>>> ANIMATION PROGRAMMER NEEDED <<<<<

An award winning L.A. film effects company is looking for a programmer to produce computer animation on an in-house graphics system for commercials, trailers and feature films. Candidates should have extensive programming experience, knowledge of graphics algorithms and a strong interest in film and animation. Call Bill Coffin at (818) 956-8406 for information.

>>>> KODAK OUT OF INSTANT FILM BUSINESS <<<<

Having lost a lawsuit over patent infringement, Eastman Kodak has decided to write-off millions of dollars worth of equipment and leave the instant photo business (Kodak's products for computer image capture were described in the newsletter last year). The company has a program of compensation for those who currently own Kodak instant film products.

> IBM ANNOUNCES NEW PRODUCTS FOR ENGINEERS <

The new IBM RT is the first product, from IBM, to utilize a new architecture called RISC (Reduced Instruction Set Computing). Under this design philosophy, the assembly language instruction set is much smaller

than normal. However, instructions are optimized for the tasks at hand and most execute in one clock cycle. Machines incorporating RISC technology in hardware & software will be capable of many CAD/CAE tasks which formerly required mainframe support. The RT uses a true 32 bit proprietary microprocessor called the 801 (used as a coprocessor on the Sierra mainframe). The RT will be capable of PC affinity with an optional PC coprocessor (the Intel 80286 is supported). PC AT devices are supported at the NET BIOS level. The targeted market place niche is technical professionals.

An integral asset of the RT computer, is another product of major importance; the AIX (Advanced Interactive eXecutive) operating system - based on Unix System V. It features a great number of functional extensions and usability enhancements. In fact, it contains object code twice the size of System 5 code; and it sets a new standard of usability. It will be relatively easy to port system V applications to AIX. However, in time, modifications may be desired - to take advantage of the attributes of the new system. In addition, a new version of PC-DOS 3.2 may be run as a task under AIX/UNIX. An entry level RT, with 1 Mbyte of memory, is rumored to cost under $7,500. A large body of hardware and software will be introduced to make these products immediately useful.

>>>>> CUPERTINO CANDIES THE APPLE <<<<<

The new Macintosh Plus has arrived, with 1-4 Mbytes of RAM memory, an 800K disk drive, a 128K ROM with hierarchical file structure, two serial ports and a Standard small Computer System Interface (SCSI). The interface is the big news, with many 3rd party vendors already lined up, with hard disks and other peripherals under their arms. Present Mac owners will be offered a liberal upgrade policy.

CG EDUCATION
MEETING LOCATION

>>> LOCAL COMPANIES OFFER CG EDUCATION <<<

DIGITAL MOTION PICTURES is offering a 2 month course in computer graphics. Focus will be on solid modeling and animation. Extensive hands-on training on a Cubicomp workstation will be provided, along with lectures. Class size is limited to 8 people. Classes will start the first week of February. Call (213) 876-6952 for information or to register.

NETWORK PICTURE SYSTEMS, INC. is also offering computer graphics education, utilizing Lumina software on IBM/PC systems. Classes consist of 24 hours of hands-on training with 2 students/system and 4/instructor.

NPS is a unique company, who's goal is to educate the graphics community in the use of computer tools; and to help the marketplace keep pace with ever changing technology.
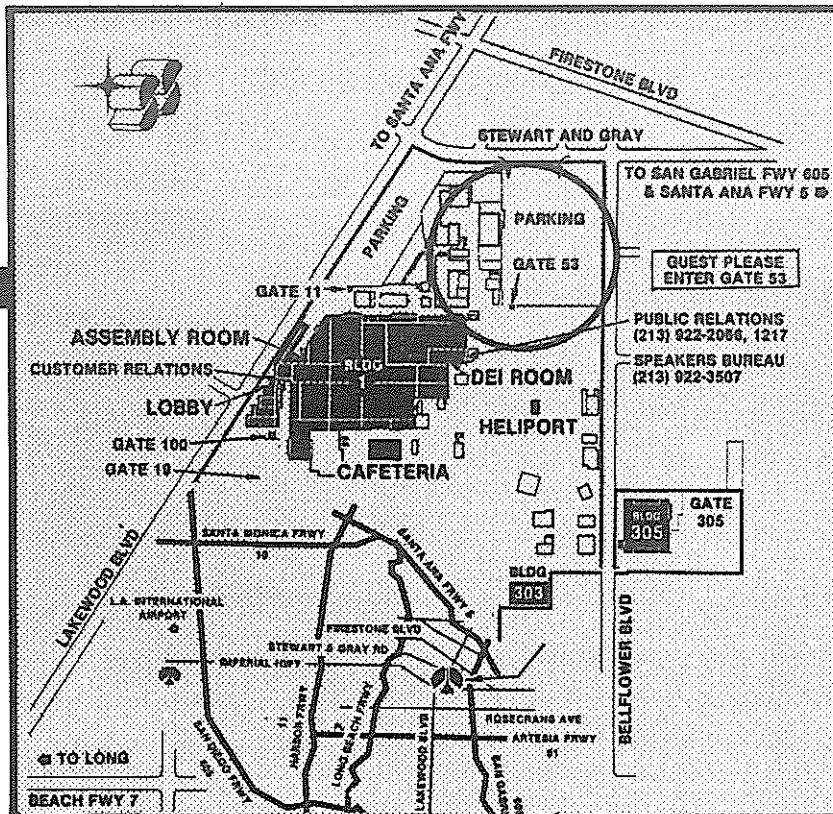
The company also prides itself on system integration - with a demonstrated capacity to bundle dissimilar software into a unified whole. For instance, with their software, you may create an object on Model Maker 300, save it as a Pic File, and load Lumina to render the object. Flat art, or video, may also be scanned in and enhanced with the Kent.Hance program; which does edge smoothing while converting from 512 to 2000 line resolution. Scanning at 2000 line res. is also supported.

The photo from Doyle Puppo Design, in the January issue, was made with the NPS software package described above - rather than the Cubicomp, as previously reported.

NPS is undergoing a reorganization. However, with talents like Brian Job, from Via Video and Ken Nolton, from Bell Labs; they should have a bright future. For information, contact Mike McCord at (213) 626-1677.

TANDY/RADIO SHACK COMPUTER CENTERS are offering $69.95 classes in MS/DOS for those interested in learning how to handle files and become "computer literate." Call Jacquelyn Brown at (213) 659-8870 for info.

SOS COMPUTERS is offering many introductory classes such as: Intro To Amiga, Amiga DOS, Intro To IBM & Compatibles, Using MS/DOS, Intro To Apple and Intro To Macintosh, Macintosh Graphics and LOGO Graphics. Classes range from $35.00 to $60.00. They also offer a free Seminar on Hard Disk Systems. Call Dave Mintz at (213) 857-0371 for details.

Calender of Events continued:

>>>>> NATIONAL CONFERENCES <<<<<

MAR. 10-12: 1986 EASTERN SIMULATION CONFERENCES (ESC) - Norfolk, VA. Sponsored by the Society for Computer Simulation (SCS). Contact: SCS, PO Box 17900. San Diego, CA 92117; (619) 277-3888.

MAR. 24-27: 1986 SPRING NATIONAL DESIGN ENGINEERING SHOW and CONFERENCE - Chicago, IL. Sponsored by the American Society of Mechanical Engineers. Contact: Show Manager, 999 Summer St., Stamford, CT 06905, (203) 964-0000.

APR.13-17 : CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS (CHI'86) - Boston, MA. Sponsored by ACM/SIGCHI, in cooperation with the Human Factors Society and ACM/SIGGRAPH. Contact: ACM conference coordinator, 11 W. 42nd St., New York, NY 10036; (212) 869-7440.

>>>>> INTERNATIONAL CONFERENCES <<<<<

FEB. 24-29: MICAD '86 - Palais des Congres, Paris, France. Sponsored by World Computer Graphics Association and MICADO. Contact: WCGA, Suite 399, 2033 M Street, NW, Washington, DC 20036; (202) 775-9556.

MAR. 3-6: COMDEX/JAPAN-Harumi Exhibition Center, Tokyo, Japan. Sponsored by the Interface Group. Contact: The Interface Group, 300 First Avenue, Needham, MA 02194; (617) 449-6600.

APR. 22-25: COMPUTER GRAPHICS TOKYO '86 - Tokyo, Japan. Sponsored by Japan Management Association. Contact: the secretariat of CG Tokyo '86, c/o Japan Management Association, 3-1-22, Shiba-Koen, Minato-ku, Tokyo 105, Japan; (03) 434-6211.