L.A. SIGGRAPH

Los Angeles ACM / Special Interest Group on Computer GRAPHics

OCTOBER
1984

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Editor - Randy Randall - (213) 394-7408

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MEETING NOTICES

WE WILL NOT BE HAVING A MEETING IN OCTOBER DUE TO THE LAST MINUTE CANCELLATION OF THE SCHEDULED HOST. The next meeting will be on November 13th at Caltech. That night's program is not finalized, and Derek Lee, our program chair, would be interested in hearing your suggestions. Please call him at (619) 455-5590 if you have a speaker or topic in mind.

SIGGRAPH GOES HOLLYWOOD

A special joint meeting, in conjuntion with other organizations, is being planned for February '84. The proposed location is The Palace in Hollywood, a theater recently converted into an elegant nightclub setting, with rooms and stages suitable for exhibits. Facilities are available for the use of sophisticated video projection systems, which could allow for dramatic exhibit of digital graphic work. Persons interested in serving on the organizing committee, or purchasing advance tickets, should contact Joan Collins at the meeting or call (213) 820-3750. **JOAN COLLINS.**

Major Due Dates for SIGGRAPH '85

"All deadlines will be strictly observed. This allows for a fair selection process and time for production of printed materials."

Course Proposals	November 30, 1984
Technical Papers	January 16, 1985
Forum Proposals	January 16, 1985
Art and Installations	March 15, 1985
Film and Video	April 17, 1985
Slides	as available

For a package of detailed information regarding contributions to the Technical Program and all of the above, contact:

SIGGRAPH '85
Conference Services Office
Smith, Bucklin and Associates, Inc.
111 East Wacker Drive
Chicago, IL 60601
(312) 644-6610

ANNOUNCEMENTS

Third Annual Pacific Northwest Computer Graphics Conference
Oct. 29-30, 1984

University Of Oregon Continuation Center, 333 Oregon Hall, Eugene, Oregon, 97403, (503) 686-4231.

This year's theme will again focus on developments & applications of computer graphics in a multi-diciplinary context. Topics will include: computer graphics as a visual tool, interactive surface modeling, earth resources imaging, computer animation, real-time visual simulation, computer graphics in communicationand developments in graphics representation and user interfaces.

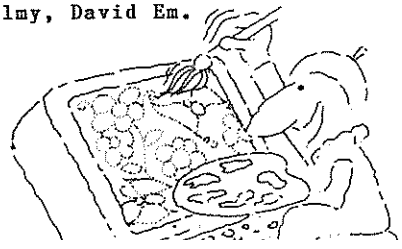
There will be an extensive trade exibition. New for this year will be applications focused workshops and the "hands-on micro-graphics computer lab." The traditional Monday Evening Film and Video Show will include historic and state-of-the-art works as well as pieces premiered at SIGGRAPH 84.

Special Early-bird Rates apply for all registrations recieved before Oct. 10, 1984.

The Aesthetics Of Computer Graphics
October 13, 1984

9:00 am - 4:30 pm, UCLA, Architecture, UCLA Extension, (213) 206-8503

Leading computer artists explore the development of computer art: the media & its aesthetics. The program includes viewing stunning tapes made by several of America's pioneers in the computer graphics field. Meet the artists who are at the forefront of this rapidly developing field: **Vibeke Sorensen, Art Durinski, Peter Sørensen, Ed Emschwiller, Max Almy, David Em.**



VOLUNTEER'S ADVENTURES

SIGGRAPH '84: THE ODYSSEY

1/17: 9:52 a.m. - Good news: I can go.
- The MCP for National SIGGRAPH has graciously offered a benefit program for starving students (Beta units) interested in attending THE computer graphics convention of the industry, but who cannot afford the registration fees. Those who can scrape together air fare (or can get into Republic Airline's reservation computer) can be "A-# One Betas" rather than pay conference fees.

2/11: 2:52 p.m. - Mail's arrived: Package for me.
- At last. The schedule of compensation...
- 20 to 24 hours of work: complimentary conference registration to all events.
- 25 to 29 hours of work: the above benefits plus proceedings and two days course notes.
- 30 to 35 hours of work: all of the above and five nights lodging with 2 or 3 roommates.
- 35 hours of work or more: rewarded on a case-by-case basis.
- Students are free to attend any course that is not full, giving priority to paying attendees.
- Volunteer badges are issued allowing admission to courses, the vendor exhibition, electronic theater shows, the art show and social events.
- Duties vary widely and are assigned to meet the needs of many different committees which rely on volunteers during those last frenzied days before the event.
- The volunteer's responsibilities include pre-registration organization and duty as airport greeters, session door-monitors, runners, gofers, haulers and go-again-fers. Very few jobs are physically demanding.
- Betas may work whenever they choose. However, duties are assigned as they arise. Jobs are available from one week before the conference until two days after.

7/1: 10:13 a.m. - Summer savings spent:Flight #527

7/20:12:45 a.m. - Leave LAX: Gate #52.
- 4:23 a.m. - Touchdown: Minneapolis, Minnesota
- 6:14 a.m. - Grab bite: Al's Kitchen.
- 8:12 a.m. - Arrive volunteer office: Room 212
- 8:26 a.m. - Duty #1: Report to vice chairman of operations.

"You need ten people to do WHAT!? O.K., no problem. Who wants to cover this job? Don't everyone jump up at once."

This man Lee Anderson, the volunteer coordinator, must be superhuman or the best user friendly unit in operation. He and units Oliver Ng and Eric Level have obviously spent kilohours in preparation for the conference. For every problem there is a module prepared, and a pleasant reply is given with each solution.

7/23: 9:17am - Convention Center: "I ROBOT" game.

The conference has truly begun! The line is halfway to the volunteer office. No more uninterrupted hours on this new video game. Now every minute counts. Run to the volunteer office. Sit. Gab. Up for the next task. But, as Lee says, "When I first came to room 212, I had no impressions. It was just a room. Then the people came, worked, participated. Tension and excitement were high. A sense of pride among the volunteers developed. It became home for us. We were all part of something. While doing all of this activity, we forgot that memories were in the making, until the day after. After looking again, at the empty room, it had become a completely different place. It's magic!"

7/27: 6:27 p.m. - Volunteer office: last words.

- "And any Bet-uh, I mean students interested in working in '85 should call Dixie Quinlin at the conference head-quarters in San Francisco during business hours. The number? Oh yeah, (408) 866-0813.

- Thanks, Lee. A program well run!

- 8:27 p.m. - Take off: Slight G-force....

NANCY COLLIER.

BOSCH REVIEW

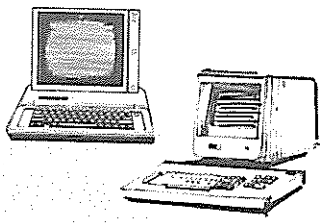
The September SIGGRAPH meeting, sponsored by the Robert Bosch Corporation, presented a dramatic overview of the Bosch FGS 4000 real-time animation system. More than 120 members and non-members made their way to the Pacifica Hotel in Westchester to watch demo tapes and hear in-depth lectures on the system which is setting standards in the realm of real-time computer generated imagery.

Stephanie Caltabiano, one of Bosch's LA sales representatives, opened the evening with a look at the Robert Bosch Corporation itself, noting that the company produces a broad range of precision products from professional videotape recorders to airplane engines.

We were then treated to a compilation of animations produced on the FGS 4000, from companies such as Z-Axis in Denver, CompuGraph Designs in New York, Editel in Chicago, and The Post Group in Hollywood. Following this demo tape, in which we saw everything from a flight through a huge three-dimensional maze to a computer-generated auto race complete with crashes, FGS 4000 Project Manager Phil Lucht spoke on how the system was developed and opened the floor to technical questions from inquisitive SIGGRAPHers.

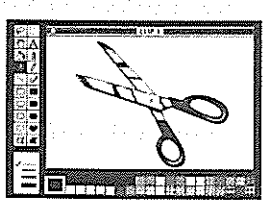
The FGS 4000 is both a real-time and frame-by-frame animation unit. Users can create two- and three-dimensional animation, and the system will automatically calculate all the in-betweening, perspective and shading. Special system architecture allows for some of the most high-resolution anti-aliased curved edges in the business. It's a polygon-based system which can treat any arbitrary two dimensional shape as a polygon of a three-dimensional object, and display it as either a raster filled, texture mapped, or vector line image. The single light source can be keyframed in direction, intensity and ambience, with simultaneous display of 16,384 colors in real time or over 16 million in non-real time mode. Operators use shaft encoders (knobs) to manipulate different parameters of the objects and to establish keyframes. Upcoming plans for the system include multiple light sources, fractals, and possibly even ray tracing.

WANTED



* **CONTRIBUTIONS TO NEWSLETTER:** We invite all members to **contribute** synopsis of magazine articles, event reviews or original material. We also encourage your comments about articles in the **L.A. SIGGRAPH.** You may have a follow-up opinion or be an expert in the field we are describing. **Can we talk?** If you don't have the time to write, give a call or send just a note suggesting an article, forum or subject that you think would be of interest to our members. Material may be submitted by mail, modem or we can "just talk." Remember, it's your newsletter! **Please contribute no later than the 3rd Monday of the month. Submit to RANDY RANDALL 320 Wilshire Blvd., Suite #3-B, Santa Monica, CA, (213) 394-7408 or call ERNIE SASAKI at (818) 577-2643.**

* **NEWSLETTER SPONSOR:** In order to provide a larger, informative newsletter, we are seeking sponsors for each issue. If you, your company or an organization you know would benifit from **exposure to SIGGRAPH members**, get in touch. This box will provide recognition for contributors in future issues.



ONLINE ART

An aspect of computer graphics which holds promise for the future is **online art.** This term might be loosely applied to art and graphics offered for sale thru a digital elecronic medium. The art may be computer generated or of conventional origin. Elecronic disemination of the art services available is what sets apart **online art.** Let's explore what is being done now and what could be done in the near future. My turn, this time. Next time, let's here your views, readers!

Logos, border designs and clip-art may be created with inexpensive paint programs running on an **Apple II, Macintosh** or IBM-PC system. Commercially, this art is suitable for newsletters, in-house journals or other small publications. For instance, the rub-on border art in this issue is $8.00/sheet from LETRASET. It could be replaced, in the near future, by computer graphics ordered and downloaded from an online catalogue of designs. Simple pictures of cars food or faces, which appear in yellow page, magazine or newspaper ads also are potential products for an **online art** database. Such a database would save the layout artist time, just as rub-ons save time today. No trip to the art store, either. Consumers could also use this art for greating cards and the like.

After a customer had downloaded art from a database, they could use their dot matrix, ink-jet printer or plotter to produce a hard copy. For small clip-art or logos, hi-contrast prints, such as **Polaroid** Type 51 sheet film, shot directly off the screen, would be suitable for paste-up. The **Polaroid Palette**, or other slide systems, may be used for color.

Mark Wauben is an artist who offers such a service, **"Imagebase,"** from his home on Catalina Island; via modem. A prospective customer can select art from 8 catagories in a manner similar to the use of an electronic shopping service. Transmission of the art takes 2 to 4 minutes. Predesigned work costs $15, custom designs are $30 or more, and can be downloaded as soon as the artist finishes the design. The goal of **Mr. Wauben** is to set up a visual database; allowing clients to view the art available while online. Communications software of this type, which would provide for translation and display of transmitted ASCII, would seem necessary if artists like **Wauben** are to find wide appeal for this service.

Such a package, **"Tekterm,"** is avaiable from **Fountain Computer Products.** This program emulates the **Tektronix 4010** by trapping for a ctrl character which turns on graphics mode. Subsequent data is interpreted as **Textronix** graphics commands. 780 x 1,024 data may be captured and transfered to a plotter. If an Apple is being used as the terminal, data is translated and also stored on either page 1 or 2 of Hi-Res memory for screen display.

There are alternatives for the the artist who does not wish to invest in sophisticated hardware dedicated to providing a call-in database. **CompuServe, The Source** and other services are open to the establishment of new databases within their hardware/software environment. Details vary from service to service and all require certain criteria to be met. For instance, **CompuServe** first requires a written proposal. If it is accepted, you sign a one-year contract, agreeing to update regularly, and attend a three-day Information Providers School in Cincinnati. You earn a royalty based on user connect time. You are not charged for transmitting or storing material.

Any vertical market, which uses simple art of this type, might be lucrative for cg artists. As an example, producers I have talked with would welcome a useful library of art they could manipulate on a home computer; creating rough sketches themselves. Communication with an **online art** database would allow quick downloading of the art elements to express a 2 am brainstorm. Today's complex photography also requires repetitious planning sketches, a task made easier by the computer.

Motion picture storyboard software is available from **American Intelliware Corp.** The program allows a library of templates to be combined and customized with paint software on the **Macintosh.** Templates for this type of program could originate in an **online art** database.

Another angle in the online picture is the use of a database to sell the artist, rather than their work. **DADA-BASE** ,the brain-child of English born New Yorker **Williiam Bowles** uses **"Speed-File"** database software on an Apple to match the needs of corporate or entertainment art buyers with artists possessing the requisite skills and references for a particular assignment. Artists are charged a nominal fee to list their services, which include updated data on where their work can be viewed. Unlike money spent on one time trade publication ads, the artist can remain on file for all future searches. The benefit to the client is a rapid custom search by as many qualifying criteria as they like.

Lets hear from our members. How are you communicating with clients, transmitting art and ideas or what are your thoughts about **online art**? RANDY RANDALL

THE LIBRARY

Here is a list of articles that have appeared in recent months in magazines not specifically oriented towards computer graphics:

The September '84 issue of Byte has an entire section devoted to cg. LA SIGGRAPH member Peter Sørensen's article **"Fractals"** is an extremely lucid explanation of this technique for non-technical people. An added bonus is a simple Applesoft BASIC program that generates fractal curves.

[Peter's other articles **"Simulating reality with computer graphics"** (Byte, March '84) and **"The Last Starfighter - imagery wrought in the total forge"** (Cinefex, #17) are also well worth reading.]

Another LA SIGGRAPH member, Joan Collins, along with Doug Tucker, writes about computer controlled laser imagery in **"Laser graphics & animation."** Such technology is being used to generate laser images 1,000 feet across on the side of a mountain in Georgia.

Also in the September Byte, the use of a specific cg system is discussed from an artist's point of view in **"The computer as an artistic tool."** **"Real-time 3-D graphics for microcomputers"** has 8086 assembly source code for implementing your own routines to perform perspective projections quickly. Unfortunately, hidden line removal is not supported, nor is any sort of area filling included.

The Scientific American (September '84) special issue on computer software has an article by one of the deans of computer graphics, Andries van Dam. His article, **"Computer software for graphics,"** is a general survey of the subject with a number of neat pictures (find out what 4-D hypersphere looks like). See his, and Jim Foley's, book Fundamentals of Interactive Computer Graphics for more details.

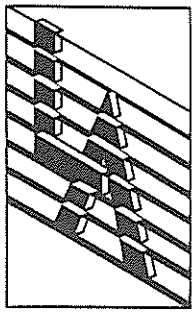
Images generated using cellular automata are featured in **"Computer software in science and mathematics."** You also get to wonder at the cost of Apple Computer's 20 pages of full color Macintosh ads!

The current issue (volume 3, number 1) of Arts & Architecture has an article called **"Computer art"** written by Tony Longson, director of the computer center at LA's West Coast University and an instructor at Cal State LA. It is a general survey of the subject, with descriptions of the works of a number of artists, including Max Almy. She & Peter Sørensen (writer of the Byte article on fractals), along with others, are scheduled to speak at the UCLA conference described elsewhere in this newsletter.

"Computer Graphics Achieves New Realism," in the June '84 issue of High Technology, has an excellent explanation of the different techniques used to generate realistic computer images along with a discussion of the problems still to be solved in this field.

"The new realism" in Science 84 (August '84) covers much of the same territory and includes a number of interesting quotes from cg experts.

ERNIE SASAKI.



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