

13th Annual Conference
on Computer Graphics
and Interactive Techniques
Dallas Convention Center
Dallas, Texas
August 18-22, 1986

Sponsored by the Association
for Computing Machinery's
Special Interest Group on
Computer Graphics in
cooperation with the IEEE
Technical Committee on
Computer Graphics

ELECTRONIC THEATRE

Dallas Convention Center
Tuesday, Aug. 19, 7:30 p.m.
Wednesday, Aug. 20, 7:30 p.m.
Thursday, Aug. 21, 6:30 p.m.

Each year, a jury of experienced professionals spends many hours selecting the most outstanding animations for the Electronic Theatre and the Animation Screening Room. Listed below, in alphabetical order, are the selections chosen for the '86 Electronic Theatre. To accommodate everyone attending SIGGRAPH, the program will be presented on Tuesday, Wednesday and Thursday evenings.

The Animation Screening Room, presents selected animations in university, research/technical, commercial and artistic areas, meriting recognition but not included in the evening performances. Located in the West Ballroom of the Dallas Convention Center, the Animation Screening Room will be open Wednesday through Friday, August 20 through the 22, 10:00 a.m. to 6:00 p.m. A list of selections and specific times will be available on location.

Special recognition must be given to the A/V crew members who provide the latest A/V technology and demonstrate the patience and perseverance needed to make the '86 Electronic Theatre and Animation Screening Room really happen.

Sincere thanks to everyone who worked together to make this year's Electronic Theatre and Animation Screening Room successful. We all welcome you to SIGGRAPH '86 and hope you enjoy the industry's latest developments.

ABEL IMAGE RESEARCH "SIGGRAPH PRESENTATION REEL"

The Abel Image Research software, developed over fifteen years of computer-aided image making, has established the company as a leader in the field of three-dimensional synthetic animation. The software provides a coupling of CAD/CAM/CAE systems with advanced computer animation. Images included in this selection have applications in the fields of sales, marketing, engineering, design, education/training and commercial production.

Credits: Abel Image Research
Contact: Pat Rooney
935 N. Highland Avenue
Los Angeles, CA
90038-2481

APOLLO COMPUTER "FAIR PLAY"

This material is a ray traced film about a game of chase between a lady and a gentleman at an amusement park. The piece demonstrates compositing particle systems with ray traced images, limb animation and 3-D texture mapping — all created on a distributed processing network of several hundred Apollo Domain workstations.

Credits: Michael Sciulli, James Arvo and Melissa White
Contact: Michael Sciulli
300 Billerica Rd.
Chelmsford, MA 01824

AT&T LABORATORIES "NEW THREADS"

This animation piece exemplifies current research being done in the modeling and animation of cloth objects.

Animation & Software: Jerry Weil
Contact: Jerry Weil
600 Mountain Avenue
Murray Hill, NJ 07974

CALTECH COMPUTER SCIENCE GRAPHICS GROUP "CALTECH 1986 DEMO REEL"

This film displays results of research by the Computer Science Graphics Group over the last year. Featured are pieces demonstrating new modeling and animation algorithms based on physical simulation, as well as a new rendering technique which extends ray tracing.

Credits: Al Barr, Ronen Barzel, Dave Gillespie, Jim Kajiya, Deven Kalra, Tim Kay, Jon Leech, John Platt, Ernie Sasaki and

John Snyder.
Contact: Al Barr
Caltech 256-80
Pasadena, CA 91125

COMPUTER ANIMATION LABORATORY GMBH "METAMORPHOSIS: ANALYSIS AND ILLUSIONS"

At the computer animation lab in Frankfurt, an innovative state-of-the-art computer animation system was used to produce high quality 3-D shaded computer-generated images, creating the perfect animated effect. These images are used for advertising and special effects, architecture, industrial and environmental design, medical and scientific research, mapping and training.

Credits: Antonios Iliakis, Sandra Edwards, Gabriel Herschdörfer, Arthur McBain, Susan Magnus, Kenneth Wesley, Helene H. Eversbusch, Rex Grignon, Manfred Büttner, Konstantinos Dangakis and Manolis Sideris.

Contact: Antonios Iliakis
Beethovenstrasse 4
6000 Frankfurt 1
West Germany

CRANSTON/CSURI PRODUCTIONS, INC. "SIGGRAPH '86 SHOWREEL"

The people at Cranston/Csuri Productions present a collection of animation produced for advertising agencies, corporate clients and in-house research, as well as for the broadcasting and medical industries.

Credits: Cranston/Csuri Productions, Inc.
Contact: Michelle L. Amato
1501 Neil Avenue
Columbus, OH 43201

CUBICOMP CORPORATION "FENESTRATION"

This piece takes the viewer on a short and surprising trip through the streets and windows of a city neighborhood.

Credits: Michael Beese, Daniel Browning, Peter deVroede, Sara Frucht, David Low, Stuart Phillabaum, Jon von Zelowitz, Wilson Burrows and John Kelsey.

Contact: Peter deVroede
3165 Adeline Street
Berkeley, CA 94730

DIGITAL PRODUCTIONS "SIGGRAPH '86 SHOWREEL"

Some of the most exciting examples of Digital Production's award-winning Digital Scene SimulationSM are shown on this reel.

Credits: Digital Productions
Contact: Stephanie Mardesich
3416 S. La Cienega Blvd.
Los Angeles, CA 90016

DIGITAL PRODUCTIONS "HARD WOMAN"

Superstar meets Super Computer. Rock star, Mick Jagger finds himself in a love triangle with computer-simulated characters — Jagger's alter-ego and "Hard Woman." The landmark piece is the first produced with digital exclusive process — Digital Scene SimulationSM.

Credits: Digital Productions
Contact: Stephanie Mardesich
3416 S. La Cienega Blvd.
Los Angeles, CA 90016

ELECTRIC IMAGE, LTD. "ELECTRIC IMAGE SHOWREEL '86"

Electric Image produces high level 3-D animation for the film and television industries. Electric Image specializes in creating complex textured imagery that attempts to move beyond the traditional use of

computers in graphic design.
Credits: Paul Docherty, Stewart McEwan, Ian Bird, Mike Milne, Martin Foster, Ian McFadyan and Penny Grant.

Contact: Penny Grant
8 Dean Street
London, England
W1V 5RL

EVANS & SUTHERLAND COMPUTER CORPORATION "SIMULATION EXCELLENCE"

All images were recorded in real time (not frame-by-frame animation) from an Evans & Sutherland CT6 computer image generation system. The videotape originally was produced for a simulation training conference and show. Nearly one man year of time was required to design the data base and perform real time scenario recording.

Credits: Evans & Sutherland and Rediffusion Simulation
Contact: Bruce Fox
580 Arapeen Drive
Salt Lake City, UT 84108

HIROSHIMA UNIVERSITY "A VISITOR ON A FOGGY NIGHT"

After sunset, room lights, gate lamps and street lamps turn on in succession. Cars come and go. In a deep fog, a car stops in front of the building. Soon after the room lights go on and off, and then turn off, the car hurries off in the foggy night.

Credits: Eihachiro Nakamae
Contact: Eihachiro Nakamae
Hiroshima University
Saijo, Higashihiroshima
Hiroshima, Japan 724

IBM CORPORATION "DYNAMICS OF $e^{ix(1-x)}$ "

This animation shows the Julia sets defined by the formula $e^{ix(1-x)}$ as parameter x is varied from 0 to 2π . Points in each frame lie on a complex plane and are colored according to the number of tries to iterate to a fixed radius. Multiple processors cooperate to compute these images by a parallel boundary — detection algorithm.

Credits: Wally Kleinfelder, S. Harvey, J. Hall, E. Nowiki, J. Weiss, G. Pfister, T. Kay, M. Tsao and H. Liberman.

Contact: Evelyn Melton
IBM T. J. Watson
Research
H4-D57
Yorktown Hts., NY 10598

IMAGICA COMPUTER GRAPHICS CENTER

"ACME DEMO REEL '86"
This show reel includes a Television Opening Program for Children, using a Vax 11/780, IMI-500, ESS-II and PDP-11/60.

Credits: Tadashi Osima, Izuhiko Suehiro, Masayo Morita, Takahisa Tamogami, Kinji Odaka, Midori Yamada, Yuji Hamajima and Hideki Nakano.

Contact: Kinji Odaka
3-13-6 Higashi-Shinagawa
Shinagawa-ku
Tokyo, Japan 140

JAPAN COMPUTER GRAPHICS LAB (JCGL)

"JCGL DEMO REEL '86"
This reel includes some of the production which was picked up from various kinds of images created by JCGL from the middle of 1985 to the middle of 1986.

Credits: Japan Computer Graphics Laboratory, Inc., (JCGL)

Contact: Takao Shimomura
6-17 Nampo-Dai

Shibuya, Tokyo
Japan 150

JPL COMPUTER GRAPHICS LABORATORY

"THE MECHANICAL UNIVERSE ... AND BEYOND"
Excerpts are shown from the second semester of a one year telecourse designed to teach college freshmen physics. Funded by the Annenberg/CPB project, the "Mechanical Universe" will be airing on many PBS stations beginning fall of 1986.

Credits: JPL Computer Graphics Lab

Contact: Don Delson
Caltech 1-70
Pasadena, CA 91125

LAWRENCE LIVERMORE LABS "LIGHT BEAMS"

This film shows light illuminating the atmosphere, filtering through the leaf canopy of a forest, coming from a candle inside a Jack-O-Lantern and coming through the clouds. It was calculated using the CRAY 1, and recorded using Dicom D48C.

Credits: Nelson Max, John Blunden, Jules Bloomenthal, Pat Weidhaas, Craig Upson and Ellen Hoffman.

Contact: Nelson Max
L 301/Box 808
Livermore, CA 94550

