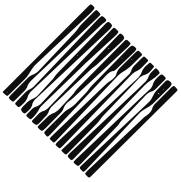
ACM SIGGRAPH VIDEO REVIEW



ISSUE 62

Supercomputing '90 Visualization Theater
with additional pieces from SIGGRAPH '90
part 2 of 2

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Issue 62

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Visualization Theater
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SIGGRAPH '90
part 2 of 2

17. Smog: Visualizing the Components

Contact:

Deanna Walker
NCSA
605 E. Springfield Ave.
Champaign, IL 61820
USA
1-217-244-6830

Technical Notes:
The results of a numerical air pollution model are used to visualize smog in the Los Angeles basin. Animations depict how wind disperses pollutants, how carbon monoxide and ozone evolve, and how visible pollutants and particulates form haze.

Produced by:
Visualization Services and Development, NCSA

Hardware:
Silicon Graphics
IRIS 4D/240 GTX

Software:
In-house, Wavefront

For information regarding the purchase of SIGGRAPH Video Review tapes, contact:

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18. More Bells and Whistles

Contact:

Wayne Lytle
Cornell National
Supercomputer Facility
B49 Caldwell Hall
Ithaca, NY 14853
USA
1-607-255-3985

Technical Notes:
This music video is a computer animation driven directly from the MIDI synthesizer score, a multi-parameter, time dependent data stream.

Produced by:
Wayne Lytle

Hardware:
IBM 3090-600J, Stardent GS1000

Software:
Proprietary musical-event driven, Texture 3.0 music sequencer, Wavefront

19. Artificial Reality at UNC-Chapel Hill

Contact:

Warren Robinett
Dept. of Computer Science
UNC at Chapel Hill
Campus Box 3175,
Sitterson Hall
Chapel Hill,
NC 27599-3175
USA
1-919-962-1798

Technical Notes:
This tape showcases virtual reality research at the University of North Carolina at Chapel Hill.

Hardware:
DEC VAXstation II/GPX, Polhemus 3Space magnetic tracker, Pixel Planes 4Graphics Engine

Software:
In-house

20. A Sequence from the Evolution of Form

Contact:

William Latham
IBM UK Scientific Centre
St. Clement St.
Winchester
Hampshire S023 9DR
United Kingdom
44-962-844-191

Technical Notes:
This computer art tape shows the evolution of a complex 3-D form, from a swirling cloud into a webbed starfish. It was produced using constructive solid geometry (CSG) modeling and photorealistic techniques.

Produced by:
William Latham, IBM UK Scientific Centre

Hardware:
IBM 3090

Software:
Winsom, ESME

21. Mathematics! Similarity and The Story of π

Contact:

Joe Corrigan
CalTech 1-70
Pasadena, CA 91125
USA
1-818-356-3758

Technical Notes:
Excerpts from several modules of the Mathematics! project, a series of videotapes to aid in teaching high school mathematics.

Produced by:
Jim Blinn

Hardware:
Hewlett-Packard Vectra 25, 386-based personal computers

Software:
Home grown

22. A Volume of 2-D Julia Sets

Contact:

Daniel J. Sandin
Electronic Visualization Laboratory
Univ. of Illinois at Chicago
Box 4348 (M/C 154)
Chicago, IL 60680
USA
1-312-996-3002

Technical Notes:
This is a visual exploration of a mathematical volume, formed by stacking two-dimensional Julia sets along the third dimension.

Produced by:
Dan Sandin at the Electronic Visualization Laboratory, University of Illinois at Chicago

Hardware:
AT&T Pixel Machine 964dX

Software:
RT/1, AT&T Pixel Machine DEVtools

23. Panspermia

Contact:

Karl Sims
Thinking Machines Corp.
245 First Street
Cambridge, MA 02142
USA
1-617-876-1111

Technical Notes:
A computer art film exploring the theory that life exists and is distributed throughout the universe in the form of germs or spores.

Produced by:
Karl Sims, Thinking Machines Corp.

Hardware:
Connection Machine CM 2

Software:
CM-Render, simulation software

24. The Process of Wound Healing

Contact:
Jules Bister
Atelier Bister Animation
Ludolfstr. 42
2000 Hamburg 20
West Germany
49-40-461858

Technical Notes:
This animation provides insight on how the microscopic world of the human body works to heal a wound.

Produced by:
Atelier Bister Animation Art Gmbh, Germany

Hardware:
Kontron Kat 386

Software:
Cubicomp Picturemaker, Race Software

25. Flight Over Mandelbrot Set

Contact:
Hartmut Jürgens
University of Bremen, FB3
Bibliothekstr. 1
D-2800 Bremen 33
Germany
421-218-2926

Technical Notes:
This flight over the mesas and dendrites of the Mandelbrot set offers spectacular views of this central paradigm for fractals and chaos.

Produced by:
H. O. Peitgen, H. Jürgens, D. Saupe, C. Zahlten

Hardware:
Silicon Graphics' workstations

Software:
In-house

26. Neptune Encounter

Contact:
Betsy Asher Hall
Jet Propulsion Laboratory
4800 Oak Grove Drive
M/S 168-522
Pasadena, CA 91109
1-818-354-0225

Technical Notes:
This video was produced during Voyager 2's Neptune encounter, August 1989. All images used were received by Voyager 2 and processed during this period.

Produced by:
Jet Propulsion Laboratory

Hardware:
Vax 8650, Vax 780, MicroVax II, Sun 4, Concurrent Image Processing Testbed (CIPT), comprised of an 8-node Mark III Hypercube and several Sun 4s

27. Invertebrate Models

Contact:
Kerry B. Clark
Dept. of Biological Sciences
Florida Instit. of Technology
Melbourne, FL 32901-6988
1-407-768-8000 ext. 8195

Technical Notes:
An animation of anatomically detailed, invertebrate animals.

Produced by:
Kerry B. Clark

Hardware:
Mac II, Julian Systems NTSC Converter

Software:
Swivel 3-D, Macromind Director

28. Sun Scientific Visualization

Contact:
Donna McMillan
Sun Microsystems, Inc.
P.O. Box 13447
Research Triangle Park,
NC 27709
1-919-469-8300

Technical Notes:
The following demos show a sampling of volume visualization and rendering techniques over a variety of scientific applications, including astrophysics, medical imaging and geophysics.

Hardware:
Sun Microsystems' SPARCstation 470 GX and 370 VX+MVX

Software:
SunVision, Custom software

29. Graftals

Contact:
Margaret Rawlings
Electronic Visualization Lab
Univ. of Illinois at Chicago
Box 4348 (M/C 154)
Chicago, IL 60680
312-996-3002

Technical Notes:
This tape contains a demonstration of an interactive game - "Graftals" - on permanent display at The Computer Museum in Boston. Graftals are mathematical techniques for creating complex forms from simple rules. Players learn what these rules are, and that one doesn't need lots of numbers or lots of brush strokes to generate naturalistic-looking plants, shrubs, bushes and trees.

Hardware:
286-based computer, TARGA board.

Software:
RT/1

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Available Issues:

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Film & Video Theater
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ISSUE 66

- *Opening Animation - Grower, Santa Barbara Studios*

1. *This is not Frank's Planet - Swain, Cal. State Univ.*
2. *McDonald's "Save the Universe" - DiNoble, Metrolight Studios*
3. *ABC's World of Discovery - DiNoble, Metrolight Studios*
4. *AMC "Feature Presentation" - DiNoble, Metrolight Studios*
5. *Total Recall - Schiff, Metrolight Studios*
6. *1990 SIGGRAPH Demo - Lamb & Company, Inc.*
7. *Gas Pipe - Hurrell, SVC Television*
8. *Dirty Power - Lurye*
9. *Nissan "Time Machine" - Gibson, Rhythm & Hues, Inc.*
10. *7-UP "Saxophone" - Gibson, Rhythm & Hues, Inc.*
11. *A Passing Shower - Nakamae, Hiroshima University*
12. *Lava Jr. - Bauer, Luxo-Klone Productions*
13. *Trillo's Adventures - Di Biagio, Intermedia Audiovisivi S.N.C.*
14. *The Audition - Miller, Apple Computer, Inc.*
15. *Pigment Promenade - Litwinowicz, Apple Computer, Inc.*
16. *Styro - Sinnott*
17. *The Hole - Sakakibara*
18. *I Have Never Seen, But I Know... - De Leon, Texas A&M University*
19. *Under the Puddle - Corson*
20. *The Nature - Taira*

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1. *Prebirth - Hashem*
2. *Blue Sky Productions Demo Reel - Brown, Blue Sky Productions, Inc.*
3. *The Great "Blue Ouah Ouah" - Baudart, Fantôme*
4. *Grinning Evil Death - McKenna & Sabiston, MIT Media Lab*

- *Closing Animation - Grower, Santa Barbara Studios*

5. *Screen Play - Martinez, Pygmee Communication*
6. *The Robe of an Angel - Motoyoshi*
7. *Sity Savvy - Stredney & Chadwick, Ohio State University*
8. *Le Pantin - Nagorny & Perrin, Relief*
9. *IAD - Thalmann, Swiss Federal Institute of Technology*
10. *Flashback - Thalmann, Swiss Federal Institute of Technology*