

Electronic Theater Program

ACM SIGGRAPH Video Review Issue 150



01 Helium

5:15

A small aerial world inside a sphere. Freshly born little creatures float in a ballet upon the rhythm of Sibelius' "Sad Waltz" music. As they dance, more creatures are born and struggle for air, until the overcrowded world explodes.

SOFTWARE

Discreet 3D Studio MAX,
Combustion, After Effects,
Adobe Premiere, Photoshop

Directors: Adam Janeczek,
Florian Durand
Producer: Supinfocom Arles

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02 La Migration Bigouden

2:31

A group of ladies from Brittany, in traditional dress, compete in a contest to cook the Breton specialty crêpes of an ethereal lightness.

SOFTWARE

Alias Maya, Adobe Photoshop,
After Effects, Premiere Pro

Directors: Eric Castaing,
Alexandre Heboyan, Fafah Togora
Producer: Gobelins,
l'école de l'image

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03 MODIS Daily Global Snow Cover and Sea Ice Surface Temperature

3:01

This animation showing the Northern Hemisphere portrays data collected via daily MODIS satellite images acquired during the winter of 2002-2003. Darkness increases with the onset of autumn, reaching a maximum at the Winter Solstice on December 21st. Thereafter, the circle of darkness shrinks as the period of daylight increases.

Daily changes in sea ice are shown as ice-surface temperature. Sea ice-surface temperatures range from about -40 to -2 degrees Celsius. Here, ice-surface temperatures are depicted by colors, with temperatures near freezing shown in shades of pink. Colder ice is shown in purple shades, while the coldest ice is shown in shades of blue/grey.

The snow tracks of several winter storms across the United States can be clearly seen. Snow from such storms may melt quickly, or linger for weeks. With an albedo of up to 80% or more, snow-covered terrain reflects most of the incoming solar radiation back into space, cooling the lower atmosphere. When snow cover melts, the albedo drops suddenly to less than about 30%, allowing the ground to absorb more solar radiation, heating the Earth's surface and lower atmosphere. Rapid changes in albedo, resulting from snowfall and snowmelt, cause significant changes in the regional energy balance.

HARDWARE

Linux PC

SOFTWARE

Pixar Renderman, Alias Maya,
Adobe Photoshop, After Effects

Director: Dorothy Hall

Producer: Horace Mitchell

Contributors: Script: Dorothy Hall, George Riggs, Cynthia Starr;

Science Advisors: Dorothy Hall, George Riggs; Lead Animator:

Cynthia Starr; Randall Jones,

Alex Kekesi, Kevin Mahoney,

Marte Newcombe, Lori Perkins,

Greg Shirah, Stuart Snodgrass,

Eric Sokolowsky, James W. Williams;

Narration: Michael Starobin;

Audio Recording: Fred Kemman;

Audio Mixing: Mike Velle; Music:

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03 La Dernière Minute

14:37

The adventures of two almost identical brothers. One is forever early and the other forever late, in a world obsessed with Standard Time and Absolute Punctuality.

HARDWARE

PC NT, Silicon Graphics Irix

SOFTWARE

Alias Maya, Pixar RenderMan,
Discreet Flame

Director: Nicoles Salis

Producer: Lazennec - Forêt Bleue

Contributor: SFX Supervisor: Allain Yan

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04 Things That Go Bump In the Night 2:02

What is a child's true deepest fear? A small child worries about what might be bumping in the shadows of night, but nothing he imagined could have prepared him for this.

HARDWARE

HP workstations

SOFTWARE

Alias Maya 6.0, Syflex, Apple Shake, Adobe Photoshop, Premiere,
Corel Painter, Sony Sound Forge, Acid

Director: Joshua Beveridge

Producer: Ringling School of
Art and Design

Contributors: Instructor:

Jim McCampbell; Voice Talents:

Elizabeth Palmer, Brian Shea,

Mack Sullivan; Sound/Music:

Matt Tate, Pat Jensen

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05 Dice

1:56

"Dice" is the animated image of surprising and rhythmic movements of rolling dice. This work is comprised of a single cut through continuous camera work. The interest of movement is expressed by the chain reaction of the rolling dice, which roll from one to the next seamlessly.

HARDWARE

Windows PC 2.8GHz

SOFTWARE

Alias Maya 4.5, Adobe Photoshop
6.0, Premiere 5.1

Director/Producer: Hitoshi Akayama
Contributor: Saburo Hirano

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06 Cubic Tragedy

3:30

A polygon girl tried to make herself prettier by using her new cosmetic tools (for polygon modeling, of course), and by doing so accidentally ruined her own face. This tragedy might have inspired one of the most famous paintings in the world.

Director: Ming-Yuan Chuan
Producers: Chun-Wang Sun,
Ming-Yuan Chuan
Contributors: Story: Chun-Wang Sun;
Animation: Ming-Yuan Chuan

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08 Overtime

4:55

Small fabric puppets find their creator lying on his bench, dead. Our sad creatures don't understand that he died, for they never had confronted such a concept...

Directors: Oury Atlan, Damien Ferrie,
Thibaut Berland
Producer: Supinfocom Valenciennes

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09 Espace 'La Vie d'Hector'

1:00

This spot follows the adventures of Hector, a flat, "paper" cartoon character who escapes from a newspaper in a waiting-room and hitches a train ride to the country. He hikes through a variety of environments before climbing a hillside and enjoying the beautiful view.

The challenge facing the team was to create a character who, while essentially 2D, was interacting in a 3D world. This required the construction of two separate rigs, a 2D one and a 3D one for moments when an element of depth was required, and for little extras like the Hector flapping in the wind. Altogether, it took about six weeks working in Maya to bring Hector to life.

One small detail likely to be lost on people focussing on Hector is that the beetle he rides on briefly is also a CG creation. The incredibly life-like creature was built, textured, rigged and animated in 2 weeks in Maya, using a real (and distinctly smelly) preserved beetle as a model.

SOFTWARE

Alias Maya, Discreet Infemo, Apple Shake

Directors: Dom and Nic
Producers: Outsider (UK) /
Bandits (France),
Publicis Conseil Agency
Contributors: Framestore CFC
Team of 10

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10 Fallen Art

5:41

On an old, forgotten military base in the Pacific, soldiers who have lost their minds due to the hardships of war have been gathered to complete one final mission. There, far away from civilization Sergeant Al cultivates his love for the brave soldiers, Dr. Friedrich cultivates his talent for photography, and the mentally lost General A creates his art. But General A does not use paper or canvas, he attempts something completely different.

SOFTWARE

Discreet 3D Studio MAX, NewTek Lightwave 3D, SplutterFish
Brazil r/s, pmG messiah:animate, Adobe Photoshop, After Effects

Director: Tomek Baginski

Producer: Platige Image

Contributors: Producers: Jarek

Sawko, Piotr Sikora, Tomek Baginski;

Executive Producer: Marcin

Kobylecki; Concept Art:

Rafal Wojtunik; Animators:

Grzegorz Jonkajtys, Lukasz Pazera,

Zbigniew Lenard, Marcin Wasko,

Arek Zawada; Artists: Radoslaw Nowakowski, Szymon Kaszuba,

Krzysztof Kamrowski, Wojtek Bagitski, Piotr Tomczyk, Andrzej Sykut,

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11 Learn Self Defense

5:01

After being brutally attacked in an alley, a man named George decides he must learn to protect himself. A cocksure narrator walks him through five practical lessons of self-defense for the individual, or nation-state!

HARDWARE

Apple Mac G5

SOFTWARE

Macromedia Flash, Adobe

Photoshop, After Effects

Director/Producer: Chris Harding

Contributor: Narrator: Mark Cook

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Chris Harding Animation

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12 Visualizing the XYZ Color Space

2:38

The development of the standard for digital-cinema colorimetry presents the problem of how to represent color in a manner that will accommodate future developments in display technology. Unfortunately, RGB coordinates tied to a physical display device are not ideal, as they intrinsically limit the gamut to only a fraction of colors visible in the real world. Thus, the chosen solution is to use the 1931 CIE “XYZ” primaries, which allow for the positive-valued specification of all visible colors.

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Contributor: George Joblove

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13 Workin’ Progress

4:17

Good workers never work alone. With numbers come efficiency, until one gets mad! “Workin Progress” is an urban musical with frenetic music of the 50’s.

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Producer: Supinfocom Valenciennes

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14 World of WarCraft

3:10

From the frozen peaks of Ironforge to the dusky plains of Orgrimmar, the “World of Warcraft” intro provides a highly detailed look at the locations and races of Azeroth, the “World” of Warcraft. This pre-rendered game cinematic combines highly detailed characters, replete with flowing hair, clothing, and armor, and extremely detailed sets and backgrounds, with remarkable results.

SOFTWARE

Discreet 3D Studio MAX,
Combustion,
Right Hemisphere DeepUV,
Adobe Photoshop,
After Effects

Director: Matt Samia
Producer: Scott Abeyta
Contributors: The Blizzard Cinematics team

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15 East End Zombies

3:10

London's East-end is invaded by herds of zombies and our "hero" is there to save the day. This short is animated using a quirky caricature style technique while the action takes place in a carefully staged 3D environment based on London's East-end.

HARDWARE

Dell Linux PC

SOFTWARE

Alias Maya, Apple Shake

Director: Damian Hook
Producer: NCCA Bournemouth
University
Contributors: Story: Ed Clayton;
Narration: Jan Weddup.

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aff/anargyros/index.htm

16 Visualization of an F3 Tornado within a Supercell Thunderstorm Simulation

1:15

The National Center for Supercomputing Applications at the University of Illinois, Urbana-Champaign collaborated with the National Severe Storms Laboratory, National Oceanic and Atmospheric Administration to create this simulation and visualization of tornado genesis.

The simulation recreates a supertwister similar to one that ripped through Manchester, South Dakota in June 2003. The initial conditions were 'seeded' with recorded pre-storm physical conditions near Manchester. The digital thunderstorm simulates the actual physical eruption and growth of the deadly tornado.

Visualization features extraction algorithms to locate tracer particles at critical points in the evolution. Derivative streamtubes track the motion of these virtual weightless particles and show airflow geometry in and around the tornado. Streamtubes are orange when rising and blue when falling. The tornado is represented as spheres rising in the updraft and colored by pressure. The tilting cones represent wind speed and direction at the ground plane and show the interaction of warm and cold air around the developing tornado.

The second counter-rotating satellite tornado was not observed in Manchester; however, this phenomenon has been infrequently recorded by storm chasers. The visualization extracts the satellite tornado, though it was a surprise to the scientists who developed the simulation model.

SOFTWARE

NCSA custom Maya plug-ins, NCSA trajectory server, NCSA data representations and transforms, VTK; Simulation Software: WORF Atmospheric Science community code, customized design by NOAA

Directors: Robert Patterson,
Donna Cox
Producers: Donna Cox,
Robert Patterson, Stuart Levy
Contributors: Alex Betts,
Matthew Hall, Lorne Leonard,
Robert Wilhelmson,
Mathew Gilmore, Louis Wicker,
Glen Romine, Lee Cronce, Mark Straka

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17 In The Rough

4:50

Styled in classic cartoon comedy tradition, "In the Rough" is a wry prehistoric fable on the pursuit of marital bliss.

HARDWARE

IBM Intellistation Dual Intel P4 Xeon 2.8 or 3.06 GHz, 2GB RAM, NVIDIA Quattro 980XGL

SOFTWARE

Alias, Discreet 3D Studio MAX, SplutterFish Brazil r/s, Eyeon Digital Fusion, Adobe Premiere, Photoshop

Director: Paul Taylor

Producers: Mandy Sekelsky, Al Shier

Contributors: Writer: Paul Taylor; Executive Producer: Tim Miller; Additional Story: Tim Miller, Leo Santos; Producers: Mandy Sekelsky, Al Shier; Animation Supervisor: Leo Santos; Lighting/Compositing Supervisor: Brian Kulig; Effects Supervisor: Kirby Miller; Storyboards: Leo Santos, Paul Taylor; Concept Art: Sean McNally, Chuck Wojtkiewicz; Layout: Jean-Dominique Fievet, Leo Santos, Paul Taylor; Animation: Ricardo Biriba, Luc Degardin, Jean-Dominique Fievet, Bryan Hillestad, Ruel Pascual, Leo Santos, Dave Vallone, Jeff Wilson, Onur Yeldan; Modeling: Ricardo Biriba, Jangwoo Choi, Zack Cork, Tim Jones, Brian Kulig, Barrett Meeker, Tuan Ngo, Cemre Ozkurt, Juan Solis, Sung-Wook Su; Rigging: Ricardo Biriba, Remi McGill, Barrett Meeker, Leo Santos; Lighting/Compositing: Corey Butler, Jerome Denjean, Juan Granja, Tim Jones, Dan Knight, Brian Kulig, Barrett Meeker, Tuan Ngo, Cemre Ozkurt; Visual Effects: Daniel Perez Ferreira, Allan McKay, Kirby Miller, August Wartenberg; Title Design: Norn Kittiaksom, Adam Swaab; Production Assistant: Amanda Powell; Programming/Systems Administration: Paul Huang, Daemeon Nicolaou, Matt Newell, Duane Powell, Barry Robison; Music: David Norland; Sound Design, Recording: Chris Trent, Gary Zacuto; Voice Talent: Doug Sept, Kirsten Severson; Foley Artist: Jerry Trent; Sound Mix: Gary Zacuto, Shoreline Studios; Digital Film Recording/ Film Processing: Fotokem

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18 A Semi-Lagrangian Contouring Method for Fluid Simulation

0:49

This video demonstrates a semi-Lagrangian surface tracking method for use with fluid simulations. The method maintains an explicit polygonal mesh that defines the surface, and an octree data structure that provides both a spatial index for the mesh and a means for evaluating the signed-distance function away from the surface. At each time step the surface is reconstructed from an implicit function defined by the composition of backward advection and the current signed-distance function. One of the primary advantages of this formulation is that it enables tracking of surface characteristics, such as color or texture coordinates, at negligible additional cost.

Director/Producer: UC Berkeley
Contributors: Adam Bargteil,
Tolga Goktekin, James O'Brien,
John Strain, Cynthia Bruyns

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Computer Animation Festival Storyboards and Concept Art

As part of the collaboration between the SIGGRAPH 2005 Computer Animation Festival (CAF) and the Art Gallery, several artists were invited to submit storyboards and concept art for their accepted CAF pieces. The chairs of the two committees selected from among the submitted artwork for exhibition in the S2005 Art Gallery venue. This special feature provides a peek inside the creative process.

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HP Constant Change

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Dice

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Things That Go Bump

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Fallen Art

Platige Image
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Revenge of the Sith

Industrial Light + Magic
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ILM 2005

Industrial Light + Magic
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World of WarCraft

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9

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La Dernière Minute

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Autocosm: Gardens of Thuban

13:45

Autocosm: Gardens of Thuban is a live performance which brings interactive computer graphics techniques into the realm of theatrical and musical performance. This work incorporates elements of animation, theater, dance, painting, sculpture, music and interactive art. The creative process for this piece is to shift continually between painting, programming, animating, composing music, designing interfaces, and performing. Gardens of Thuban is a structured improvisation: the artist starts with an empty field, and then creates an alien landscape and populates it with organic plants, trees, stones and flowers. This is an autocosm, a self-contained world with its own logic and rules. In the course of the piece, the world grows and, with the help of a catalyst, bursts into life. The action is an allegory of awakening and transformation.

Graphics and music created and performed live by J.Walt.

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Threading Time: SIGGRAPH 2005 Art Gallery 3:11

The SIGGRAPH 2005 Art Gallery review gives a dynamic impression of the artwork and ideas the audience will find in this year's show Threading Time. Key themes in digital art are represented by text and images. The video begins with a sound piece by world renowned sound artist, Charles Morrow. It goes on to highlight the artwork of six invited artists and then it opens out into a series of images of the juried works. A professional team of broadcast designers and artists have created an art gallery promotional review that's artistic in its own right.

Director/Producer: Beth Warshafsky - Pratt Institute

Contributors: Linda Lauro-Lazin - S2005 Art Show Chair; Designer Animator:

Lauren Wang - Mechanism Digital;

Sound Design: Charlie Morrow - Charles

Morrow Studios; Audio Engineer: Matt Stine -

Charles Morrow Studios; HD Production:

Edgeworx; Production Support: Jong Jin Choi,

Ellen Scott, Sandra Villareal; Special Thanks:

Office of the Provost, Office of the Dean of
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Point of View

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Dice

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The Emerging Technologies highlight video showcases a sampling of the amazing works that will be seen in at the SIGGRAPH 2005 Conference in Los Angeles. Works range from virtual and augmented reality, imaging and video technology, novel projection systems, haptic interfaces, robotics, creative use of sensors, human-computer interfaces, electronic art installations, wearable computing, and new forms of gaming technology.

Directors/Producers: Donna Cox - National Center for Supercomputing Applications; Bonnie Mitchell - Bowling Green State University
Contributors: Animators/Video Editors: Joshua Fry, Patrick McPeck - Bowling Green State University; Audio Composing/Sound Effects and Recording: Seann Flynn, Sean Hagerty - Bowling Green State University; Narration: Megan Grandstaff, Travis Malone - Bowling Green State University

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SIGGRAPH 2005 Paper Tour

3:25

The "SIGGRAPH 2005 Paper Tour" showcases a selection of snippets from the technical video footage accompanying the scientific publications presented in the Conferences papers program. When viewed out of their context, many of these short segments can be quite funny. The presentations are grouped into new, interesting "special" sessions with promising titles like "The Physics of Hollywood", "Stick Figure Workout" or "Pixel Farm". The trailer is designed to encourage the Electronic Theater audience to attend the SIGGRAPH 2005 papers sessions.

Director: Yoav Parish
Contributors: Papers Chair: Markus Gross;
Paper Selection: Markus Gross, Julie Dorsey;
Narration: Peter Fischli; Music: Ivan Masha K. - Flying Hands Music; Recording Engineer: Adrian Frutiger; Final Mix: Alexander Friedrich; Asst. Sound Editor/2D Editor: Nico Juri; 3D Modeling/Animation: Simon Haegler

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Samuel Lord Black, S2005 Computer Animation Festival Chair, challenged computer graphics professionals, students, and designers with an invitation to create short (7 second) animations of the SIGGRAPH 2005 conference logos. The creations we selected were scattered though the Electronic Theater, and range from whimsical characters to fluid simulation and fractal growth algorithms.

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Green's Fractal Terrain

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4:3



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