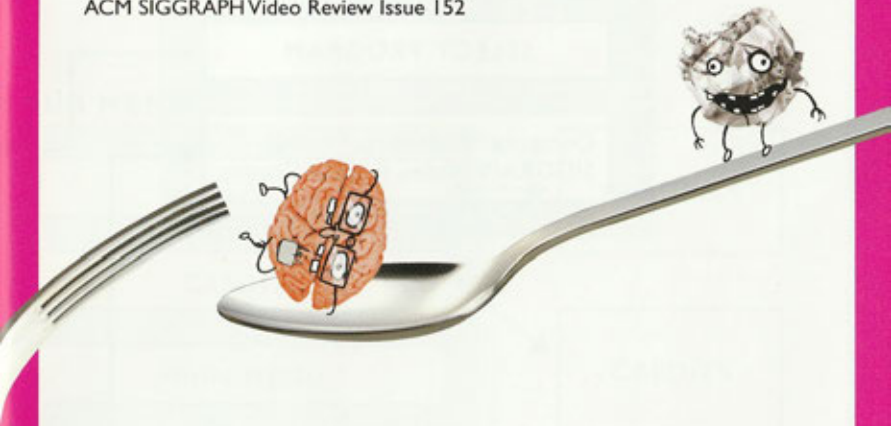
SIGGRAPH2005

# Animation Theater Program PART 2

ACM SIGGRAPH Video Review Issue 152



DVD VIDEO

## 01 Awkward 2:54

When boredom strikes three friends with nothing to do and brain cells to kill, the answer arrives in the form of delightful beer. Sadly for our trio, a sudden and unwelcome discovery turns their night of fun, games, and chummy drunkenness into a humiliating fiasco.

**SOFTWARE**

Alias Maya 5.0, Adobe Photoshop 7.0, Illustrator CS, After Effects 6.0, Premiere 6.0, Apple Final Cut Pro 3

Director/Producer: Cesar Kuriyama
Contributor: Music: William Caballero

**Contact:**
Cesar Kuriyama
Pratt Institute / Embrionyc Productions
196 Palisade Avenue
Cliffside Park, NJ 07010
USA
+1.646.642.8902
cesarkuriyama@hotmail.com
www.cesarkuriyama.com

## 02 Surly Squirrel 10:45

A starving park squirrel and rat come across a discarded pizza slice. The duo's greed disrupts the natural order of the park. Simultaneously, across the street from the park, a bank heist is taking place in the human world.

The two worlds collide in an uproarious escape for both rodents and bank robbers alike. The story culminates in a car chase with police and park animals in hot pursuit. The pigeons save the day, restoring order to both worlds, for now.

**SOFTWARE**

Alias Maya

Director: Peter Lepeniotis
Producers: Pranay Patel, Rob Aitchison
Contributors: Writer: Peter Lepeniotis; Executive Producers: Dan Krec, Jackie Lynette

**Contact:**
Peter Lepeniotis
174 Morse Street
Toronto, Ontario M4M 2P8
Canada
+1.416.461.7082
peterl@dkp.com

## 03 Street Stories - Episode 14: "To Air is Human" 1:43

"Think it's an easy climb to the peak of rock 'n' roll mountain? Think again." In this episode of Street Stories we talk with Edgar, a self professed rock god. Edgar discusses the long hard road traveled in order to become the best. "As long as I have my trusty six string, there ain't nothing I can't handle."

**HARDWARE**

HP workstations

**SOFTWARE**

Alias Maya, Apple Shake, Adobe Photoshop, Premiere

Director: Christopher Bancroft
Producer: Ringling School of Art and Design
Contributors: Technical Support: Karissa Miller, Jennifer Bradley

**Contact:**
Christopher Bancroft
11321 Tralee Drive
Riverview, FL 33569
USA
+1.941.309.4713
cbancrof@rsad.edu
www.rsad.edu/~cbancrof

## 04 Food for Thought 1:58

While out for a stroll, slow-witted Mugtor and his more intelligent acquaintance Nishu become extremely hungry. They find some fruit up in a tree, but it is just too high up for either of them to get at it alone. After some slight communication problems, the two realize they must work together in order to satisfy their craving. The burly Mugtor uses his brawny strength to hurl Nishu into the fruit-laden treetop, but right away the greedy Nishu takes advantage of his unsuspecting and dim-witted partner. First Nishu eats fruit after delicious fruit simply to cure his hunger, but soon begins to enjoy the position of power he finds himself in. He then taunts the hapless Mugtor, who can only helplessly watch from below, craving the fruit more and more with every passing moment. How long can the imbalance continue before things are set right? Can Mugtor overcome his slow oafish nature and figure out a way? Perhaps he could even teach Nishu a thing or two!

**HARDWARE**

HP workstations

**SOFTWARE**

Alias Maya, Adobe Photoshop CS, Premiere

Director: Ian Yonika
Producer: Ringling School of Art and Design
Contributor: Ben Garceau

**Contact:**
Ian Yonika
1130 Greensboro Lane #652
Sarasota, FL 34234
USA
+1.603.801.9385
iyonika@ringling.edu

## 05 Venice Beach 4:27

A simple event in a crab's gym. Two crabs exercise and a stranger appears in front of them. They then experience an absurd situation.

**HARDWARE**

PC/Intel P4 single 2GHz CPU, 1 GB RAM

**SOFTWARE**

Discreet 3D Studio Max, Character Studio, Adobe After Effects 6.0, Premiere 6.5, Photoshop

Director/Producer: Jung-Ho Kim
Contributors: Stephen Chiodo, Maureen Selwood, Michael Scroggins

**Contact:**
Jung-Ho Kim
Dongseo University
Digital Content Department
San 69-1 Churye-dong Sasang-gu
Busan 617-716
South Korea
+82.10.7226.1379
kimjungho@hotmail.com

## 06 Lionel 2:36

A 5 years old schoolboy is interviewed by the director of a documentary.

**SOFTWARE**

Alias Maya, Adobe Photoshop, After Effects, Macromedia Flash

Directors: Gabriel Gelade, Medhi Leffad, Anthony Menard, Matthieu Poirey
Producer: Gobelins, l'école de l'image

**Contact:**
Eric Riewer
Gobelins, l'ecole de l'image
73 Boulevard Saint Marcel
Paris 75013
France
+33.1.40.79.92.40
+33.1.40.79.92.69 fax
cperrin@gobelins.fr

## 07 Surgical Planning in Congenital Heart Disease by Means of Real-time Medical Visualization and Simulation 6:02

Pre-operative evaluation of surgical strategies is of utmost importance in many areas of surgery. In particular this is true for surgery in congenital heart disease, where the complex morphology varies from individual to individual. This animation shows how interactive, real-time computer graphics is emerging in the fields of diagnostics and surgery planning in congenital heart disease. Using magnetic resonance imaging (MRI), volume rendering, and a GPU-based surgical simulator, we follow the treatment considerations of a ten-year old girl with congenital heart disease. From three-dimensional MRI data, a detailed model of the patient-specific anatomy is obtained. The diagnosis is obtained from the MRI data and the reconstructed model. Surgical strategies are subsequently explored in the simulator. A spring-mass based physical simulation is resolved entirely on the GPU in real-time. For a complex organ like the heart, where a highly detailed model is necessary to model the anatomical details accurately, real-time convergence would not be achieved by existing CPU implementations.

**HARDWARE**

PC, Pentium 4, 3 GHz, 1 GB RAM, GeForce 6800; Polhemus Fastrak

**SOFTWARE**

Adobe Premier Pro, After Effects, Photoshop, Right Hemisphere Deep Exploration, Custom volume rendering and MRI reformatting software, Custom GPU-based surgical simulator

Director/Producer:
Thomas Sangild Sørensen
Contributors: Modelling/Graphics: Thomas Sangild Sørensen, Jesper Mosegaard; Script: Thomas Sangild Sørensen; Editing: Henrik Hovgaard, Ruben Borup, Thomas Sangild Sørensen; Voice: Nina Gøtzsche Thiele

**Contact:**
Thomas Sangild Sørensen
Centre for Advanced Visualisation and Interaction
University of Aarhus
Aabogade 34
Aarhus N 8200
Denmark
+45.8942.5647
sangild@cavi.dk

## 08 The Elbe Flood 5:58

In August 2002 Europe experienced the worst flooding in more than a century. A particular weather situation led to extreme rainfalls and floods that killed over a hundred people and forced tens of thousands to leave their homes. For damage assessment and coordination purposes disaster organizations needed fast access to up-to-date geo-data. Due to the extent of the disaster and the weather conditions only satellites were able to provide the required images.

This animation was produced on behalf of the European Space Agency to illustrate the benefit of remote sensing techniques in case of catastrophes.

The intention was to explain the uncommon weather situation and the potential of remote sensing satellites to a general public. For this purpose, data of ten different optical and radar satellites had to be geo-referenced and enhanced before integration. Even the digital elevation models used were generated from satellite data. Special interpolation algorithms were used to increase the repetition rate of a meteorological time series from two to ten frames per hour. The animation was put into practice as a stereoscopic production to provide real three-dimensional perception. Thus ways had to be found to add spatial depth to a primarily flat incidence such as a flood.

**HARDWARE**

Yello Springtime Editing System, Dual Pentium 800 Mhz, 1GB RAM

**SOFTWARE**

Seaspace Terascan, Erdas Imagine 8.6, Discreet 3D Studio Max, Combustion, Edit, Adobe Photoshop

Directors: Nils Sparwasser, Robert Meisner
Producer: Nils Sparwasser
Contributors: Christian Gredel, Adelheid Craubner, Thomas Ruppert, Robert Meisner, Adam Majorosi

**Contact:**
Nils Sparwasser
German Aerospace Center
Muenchner Strasse 20
Oberpfaffenhofen / Wessling
82234
Germany
+49.8.153.281.316
+49.8.153.281.313 fax
nils.sparwasser@dlr.de
www.caf.dlr.de

## 09 Tick Animation I 3:56

The film describes how the FSME virus is transmitted from tick to human.

A tick waits in the high grass for a new victim. It scents an approaching jogger and is wiped off by one of his legs as he passes through the grass.

On the skin of the jogger the tick searches for a soft and humid place. As the tick finds an appropriate spot it starts to cut through the skin. The film takes the viewer on a journey through the salivary gland of the tick where the FSME virus reproduces itself.

**SOFTWARE**

Alias Maya, NewTek Lightwave, Adobe Photoshop, After Effects, Maxon BodyPaint, Eyeon Digital Fusion

Directors: Sven Dreesbach, Matthias Zeller
Producer: Filmakademie Baden-Württemberg
Contributors: Script, Animation, Directors of Photography: Sven Dreesbach, Matthias Zeller; Script: Joerg Wolf; Storyboard: Gunter Grossholz; Scientific Consultant: Martin Komorek; Music: Ilja Polach; Producer: Klaus Riech; Narrator: Hans-Peter Boegel; CG Artists: Sven Dreesbach, Tanja Krampfert, Markus Plinke, Patrick Wachowiak, Florian Waldenmaier, Matthias Zeller

**Contact:**
Prof. Thomas Haegele
Filmakademie Baden-Württemberg
Mathildenstrasse 20
Ludwigsburg 71638
Germany
+49.7.141.969.800
+49.7.141.969.888 fax
animationsinstitut@filmakademie.de
www.animationsinstitut.de

## 10 Cell Invasions: Visual Computing, Health, and Cancer 4:24

We are developing visual computing tools and simulation models with which to study the complex behavior of migrating cells in normal 3D tissue development, and in major lethal disorders of cell migration such as cancer. Our tissue matrix models are implemented in MAYA®(Alias, Toronto) to leverage the built-in physics engine and MEL language for the simulations. Tissue matrices were grown in silico with a 9-state random walk algorithm to generate positions in 3-space for NURBS fiber axes. NURBS tubes were

then extruded along each fiber axis to model the van der Waals contact surface of the fiber. A collision avoidance procedure minimized fiber intersections. An exponential distribution of waiting times drove cell motion (defined by a multi-state Markov automaton) along their fiber contact points and the displacement between fibers. Migrations were studied at low and high tissue matrix densities and a range of cell motion rules in which we varied motion likelihoods on, around, and between the fibers of each 3D mesh. The persistent random walk paths of the cells compared favorably with real cell behavior for some rule sets, but for others identified a new class of cells, not yet observed experimentally, with aggressively multi-phasic invasive motion.

Director: Charles Lumsden
Producers: Charles Lumsden, Nicholas Woolridge
Contributors: Script/Storyboard: Charles Lumsden; Production/Storyboard: Nicholas Woolridge; Storyboard/Animation/Post-Production: Jason Sharpe; Animation: Donald Ly

**Contact:**
Charles Lumsden
Department of Medicine, University of Toronto
Room 7313, Medical Sciences Bldg.
1 Kings College Circle
Toronto, Ontario M5S 1A8
Canada
+1.416.978.7178
+1.416.978.3701 fax
charles.lumsden@utoronto.ca

## 11 Manufacturing Proteins with Biomolecular Machines 5:13

All proteins in all cellular organisms arise through the process of translation. In this process ribosomes, massive molecular machines, convert excerpts of the genetic code (i.e. mRNAs) into peptide chains that are subsequently folded into functionally active proteins responsible for executing a wide array of tasks. Past and present research has partially elucidated the complex structure and choreography of the ribosome during translation. We attempt to create a biologically illuminating and visually attractive animation that incorporates current understanding of the protein synthesis process. Using e coli as our model, we highlight the specific nucleotides and amino acids that participate in or catalyze particular biochemical reactions.

**HARDWARE**

Macintosh G5, 2GB RAM, 5-node Linux cluster, 1GHz, 1GB RAM

**SOFTWARE**

Alias Maya, Adobe After Effects

Director: Rick Hankins
Producers: Chandrajit Bajaj
Contributors: Rick Hankins, Katherine Clarridge

**Contact:**
Rick Hankins
Computational Visualization Center
University of Texas at Austin
1 University Station C0200
Austin, TX 78712
USA
+1.512.771.6753
rhankins@ices.utexas.edu

## 12 Image-Based Material Editing 2:08

This work showcases a feasibility study on editing the appearance of objects in images. For each frame, the input is a single high dynamic range photograph. An alpha matte is created by hand to differentiate the object from its background. In separate automated processes, the object is removed from the background, and the 3D shape of the object is recovered. The background is then blurred, color enhanced and texture mapped onto the 3D shape, resulting in an object which appears to be made of a different material. The novelty of this work lies in the fact that extensive material changes are possible without manually reconstructing a 3D scene. The success of this approach is assured by carefully exploiting idiosyncrasies of the human visual system. For instance, the refracted pattern of light needs to be consistent with the shape of the object, and its overall tone needs to be consistent with the environment. Otherwise, significant deviations from physical accuracy are tolerated by the human visual system, which relaxes the demands on our material editing algorithms. This, in combination with the recent development of several image processing techniques, allows objects to be turned into transparent, translucent as well as arbitrary reflective materials.

Director/Producer: Erik Reinhard
Contributors: Erum Arif Khan, Oguz Akyuz, Roland Fleming, Heinrich Buelthoff

**Contact:**
Erik Reinhard
University of Central Florida
School of Computer Science
CSB, Room 201
Orlando, FL 32816-2362
USA
+1.407.823.4289
+1.407.823.5419 fax
reinhard@cs.ucf.edu

## 13 Sal And The Great Frustration 2:05

Sal used to be an award-winning professional race car driver. Now, cruel reality forces him to live his drab existence bound to a wheel chair inside the walls of Sunny Crest retirement home.

**SOFTWARE**

Alias Maya, Adobe Photoshop, Apple Shake

Director: Andrew Malesky
Producer: Ringling School of Art and Design
Contributors: Linda and Ed Malesky, Jim McCampbell

**Contact:**
Andrew Malesky
305 Ivy Street
Redlands, CA 92373
USA
+1.941.726.1041
amalesky@rsad.edu

## 14 True Color 7:04

Each day, robots drive bikes through a white world. Dummies fill gas tanks by day and clean streets and buildings at night until a handling error makes colors appear....

**SOFTWARE**

Discreet 3D Studio Max, Adobe After Effects, Combustion, Premiere

Directors: Pierre Ducos, Bertrand Bey
Producer: Supinfocom Arles
Contributors: Ducos Pierre, Bertrand Bey

**Contact:**
Anne Brotot
Supinfocom Arles
2 route de Crau
Arles 13200
France
+33.4.52.11.00
a.brotot@supinfocom-arles.fr
www.supinfocom-arles.fr

## 15 Hopeless Romantic 3:53

A young boy in love with his teenage neighbor tries desperately to attract her attention, with increasingly disastrous results. This animated short was a solo student project.

**HARDWARE**

Dell Precision Workstation

**SOFTWARE**

Alias Maya, Adobe Photoshop, Premiere

Director/Producer: Bill Burg

**Contact:**
Bill Burg
Pratt Institute
48 West 91st Street Apt. 4
New York, NY 10024
USA
+1.917.846.8182
wpeterburg@yahoo.com

## 16 Moscow Souvenir 2:37

This short contains a loose narrative that combines holiday snapshots and abstract Kandinsky compositions into an emotive travel journal.

Director: Luke Bailey
Producer:
NCCA Bournemouth University

**Contact:**
Anargyros Sarafopoulos
NCCA Bournemouth University, Media School
Talbot Campus Fern Barrow
Poole, Dorset BH12 5BB
UK
+44.1202.965639
+44.1202.595099 fax
asarafop@bournemouth.ac.uk
ncca.bournemouth.ac.uk/main/staff/anargyros/index.htm

## 17 Piñata 4:08

Piñata is that classic story about a stuffed donkey's search for respect. On the list of bad jobs, getting smacked with sticks by small children who want to get to your insides is right up there. One small, feisty, lolly-stuffed Burro has had enough, but there's an even smaller, determined little girl who decides his sweets are going to be hers no matter what.

Caution: contains hitting, sombreros and papier-maché.

**SOFTWARE**

Discreet 3D Studio Max,
Combustion

Director: Mike Hollands
Producer: Thomas Schober

**Contact:**
Thomas Schober
Act3animation
Level 1, 240 Chapel Street
Prahran, Victoria 3181
Australia
+613.9510.8943
+613.9510.8953 fax
thomas@act3animation.com
www.act3animation.com

## 18 The Regulator (Le Régulateur) 15:29

A couple adopts a child, built with many different pieces. But the choice of the pieces is so huge that the child will not be as perfect as he should be...

**SOFTWARE**

Alias Maya 4.5,
Adobe Photoshop 6.0

Director: Philippe
Grammaticopoulos
Producer: Jean-Jacques Benhamou

**Contact:**
Philippe Grammaticopoulos
14 rue Lejemptel
Vincennes 94300
France
+33.6.07.30.37.90
popouloss@hotmail.com