ACM SIGGRAPH VIDEO REVIEW

ISSUE 140



SIGGRAPH 2001 THEATER PROGRAM ANIMATION

TABLE OF CONTENTS

ACTION/ADVENTURE

- 1 Wild Jungle Motion Ride—Sega Corporation
- 2 Metal Gear Solid 2 Sons of Liberty Liberty—Konami Computer Entertainment Japan
- 3 Master Q Menfond Electronic Art and Computer Design Company, Ltd.
- 4 Stop Motion Versus Computer Animation-Will Vinton Studios
- 5 Oddworld: Munch's Oddvsee™. SIGGRAPH Teaser—Oddworld Inhabitants
- 6 Time Out—Vancouver Film School
- 7 Cartoon Network's "Quick Draw El Kabong"—Wild Brain, Inc.
- 8 Microsoft Xbox "Two to Tango"— Blur Studio

SCIENCE FACT/FICTION - THE PREQUEL

- 9 F8—Crystalline Lens
- 10 New World Computing Cinematic Team—New World Computing
- 11 Zoids—Shogakukan Music & Digital Entertainment Company, Ltd.
- 12 In the Body—Savage Frog!

DOCUMENTARY

- 13 Computer Reconstruction: Temple Site at Phimai-University of Calgary
- 14 Considering an Exotic Pet?—Skye Carlson
- 15 Synthesizing Sounds from Physically Based Motion— University of California, Berkeley
- 16 DAB: Interactive Haptic Painting with 3D Virtual Brushes-University of North Carolina at Chapel Hill
- 17 Desert H2Ouse—k+d.lab

- 18 Capitol Zoom—NASA/Goddard Space Flight Center
- 19 New Baiyun International Airport, Guangzhou City, China—URS / Creative Imaging Group
- 20 Wing 2001—Digital Frontier Inc.
- 21 Courthouse With Curved Elements—Massachusetts Institute of Technology
 - 22 The Book of Pooh—Shadow Digital IIC.

COMEDY - THE RETURN

- 23 Comics Trip—SUPINFOCOM
- 24 Kami—SUPINFOCOM
- 25 Tabasco Commercials—UPSTART! Filmproduction GmbH
- 26 The Turing Test—LifeFX Inc.27 Hubert's Brain—Wild Brain, Inc.
- 28 Hessi James—Filmakademie Baden-Württemberg

SCIENCE FACT/FICTION - THE RETURN

- 29 Horses On Mars—University of Southern California
- 30 Freeware—Academy of Art
- 31 Exploring Serotonin in the GI Tract—IOMedia
- 32 Oblivious—Ringling School of Art & Design
- 33 Knitwear Rendering—Microsoft Research China
- 34 X-Men: Mystique Transformations—Kleiser-Walczak
- 35 Antarctica: A Flying Tour of the Frozen Continent—NASA/Goddard Space Flight Center
- 36 Evolution of the Universe: Largescale Structure and Galaxy Formation—National Center for Supercomputing Applications

ACTION ADVENTURE

1 Wild Jungle - Motion Ride

PRODUCER Shingo Yasumaru

SUMMARY

A jungle tour of downhill bumps, cliff-hangers, a collapsing bridge, discovery of an ancient burial site, and an unpredictable ending turns this into one wacky adventure. Wild Jungle is a twelve person motion ride with a 180 degree wrap-around screen seamlessly projected by three CRT projectors at 60 frames/second.

CONTRIBUTORS

Director: Shinji Torigoe

Shinji Lei, Ryo Takahashi, Toshinori Takata, Kazue Tsukamoto, Yoshimi Saito,

Takamasa Namiki, Yukiko Isobe, Youichi Iwata, Hiroki Morikawa, Masahito Honda, Masato Takazawa, Takako Ohbuchi, Syozi Okada, Kenichi Hasegawa, Ryo Matsubara, Ji-youn Song, Masaki Sakai, Makoto Fukushima, Kazuhiko Nagai

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2 Metal Gear Solid 2 Sons of Liberty

PRODUCER Hideo Kojima

SUMMARY

This work was created by editing in-game demo scenes of our PlayStation 2 game Metal Gear Solid 2 Sons of Liberty planned for a 2001 release. Almost all of the scenes consist of materials rendered at real time on a home game console instead of an expensive PC. Our challenge is striving for CG footage that you can touch rather than watch.

CONTRIBUTORS

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3 Master O

PRODUCER Tsui Hark

SUMMARY

Master Q is a legend in Chinese folk culture. Most Chinese know this comic character since the 60's. Combining the vision of Director Tsui Hark and Menfond production, we produced a 75 minute 3D character movie within 8 months. It becomes the first 3D character animation in Chinese film history. Tsui Hark said, "Master Q brought me a lot of happy and sweet memories, especially since there has been so much pressure and misery in our society and families. I would like to have this opportunity to introduce a peaceful and joyful world to the audience."

CONTRIBUTORS

Director: Eddy Wong, Herman Yau China Star Entertainment Group, One Hundred Years of Film, Film Workshop Co.Ltd. Menfond Electronic Art and Computer Design Co., Ltd.

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4 Stop Motion Versus Computer Animation

PRODUCER Erik Vignau

SUMMARY

Contrary to its title. Stop Motion Versus Computer Animation employs harmony rather than conflict. It is a collaboration of disciplines, formats, stop-motion, CG, high-definition video and live-action film brought together for laughs.

Software: Maya, After Effects, Jenoptic MF

CONTRIBUTORS

Director: Kyle Bell Producer: Erik Vignau

FX Supervisor/Compositor: Noah Klabunde

DP: Mark Ifort

Editor: George Shubin

Stage Manager: Toby Ethridge Camera Operator: Charlie Rewalt Motion Control: Bret Crutcher Camera Assistant: Audrey Moore

TD: Alex Inman

Electronic Imaging Engineer: Gary

McRobert

Digital Image: Dean Koenig Model Builder: Bill Stall Character Setup: Derick Carlin CONTACT:

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5 Oddworld: Munch's Oddysee™, SIGGRAPH Teaser

PRODUCER Sherry McKenna

SUMMARY

How would you feel if you broke your leg in a bear trap, were abducted by soulless scientists, had an alien device implanted in your skull and found out your race had been hunted to extinction? Meet Munch™, the hero of Oddworld's oddest opus yet! Captured by sadistic Vykker neurosurgeons, Munch and his fellow lab animals must escape Vykker's Labs Pharmaceutical Corporation before they are processed into a thousand tiny pain relievers.

3D models, animation and rendering were created using Maya and composited using Shake. Water was created using Arete Nature F/X and Paraform was used for scanned data

CONTRIBUTORS

Director: Lorne Lanning Assistant Director: Chris Ulm

Producers: Shane Keller, Josh Heeren Production Design: Farzad Varahramyan, Raymond Swanland, Gautam Babbar, Silvio Aebischer Animators: Scott Easley, Shawnalee Anderton, Mauricio

Hoffman

Technical Directors: John Burk, Matt Aldridge, Ryan Ellis, Marke Pedersen, Jain Morton

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6 Time Out

PRODUCER Vancouver Film School

SUMMARY

A little boy has been give a 'time out' in the corner, when he gets an idea to become a Superhero. He creates havoc around the house unaware that he will encounter his greatest weakness.

CONTRIBUTORS

Director: John Wong Sound: Brett Anthony Editor: Rina Gallo

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7 Cartoon Network's "Quick Draw El Kabong"

PRODUCER Liz Gazzano

SUMMARY

Cartoon character "Quick Draw McGraw" becomes El Kabong the Hero and fights El Bad Guy with his steel guitar. El Kabong & Babalooie ride into a garishly colored small town in Mexico that is inhabited by Day of the Dead skeletons. El Bad Guy and his cohorts are generally out to get the townfolk. El Kabong saves them and heroine Linda Neigh from certain disaster at the end of the piece and El Bad Guy gets his just desserts.

Hand-painted characters and backgrounds were scanned into the Mac and animated in After Effects. Music by the band Calexico.

CONTRIBUTORS

Director: George Evelyn

Production: Wild Brain, Inc., San Francisco, CA

Producer: Liz Gazzano

Executive Producers: Jeff Fino, Paul

Golden

Animation Director: Jance Allen Production Design: Dave Gordon Agency: Cartoon Network

Agency Creative Director: Michael

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Agency Writer: Dave Berg

Agency Producer: Lynn Slowinski

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8 Microsoft Xbox "Two to Tango"

PRODUCER Al Shier, Sherry Wallace

SUMMARY

Microsoft came to Blur seeking a cutting-edge teaser that would add impact and energy to the unveiling of its future Xbox gaming console. With the visceral and energetic Two to Tango that Blur created, we were able to convey the emotion, intensity, and visual splendor that video games on the Xbox will possess in the very near future.

CONTRIBUTORS

Director: Tim Miller

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SCIENCE FACT/FICTION - THE PREQUEL

9 F8

PRODUCER Jason Wen

SUMMARY

An individual steals a unique identity in a world of absolute control. Software: LightWave, Project Messiah, After Effects, Premiere, Photoshop, Steinberg Nuendo

CONTRIBUTORS

Screenplay: Howard Wen Concept Artist: Andrew Jones Music: Casey Hess, Don Relyea

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10 New World Computing Cinematic Team

PRODUCER Mark Caldwell

SUMMARY

The NWC Cinematic Team is dedicated to the ideal that as a species, we are either inherent storytellers or we're those who hunger to experience the rich tapestry woven by those visual artisans. So prevalent is this drive that there is room for both the industrial entertainment machines and the village storytellers, in whatever form that they take. We are only seven, but each of us bring to the table one exquisite spice to mix with our diligence and passion into a feast that we humbly lay before our family, friends and neighbors.

CONTRIBUTORS

Director: John Slowsky Brian DeMetz, John Gibson, Todd Luallen, Adam MaCarthy, Kurt McKeever, Phelan Sykes

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11 Zoids

PRODUCER Toshihiro Nakazawa

SUMMARY

A toon shader was used to blend 2D cel animations. First, each 3D model's basic actions (walking, running, jumping) were established, then using the animation sequence function of Softimage 3D, an autofilling motion blend was performed to produce many cuts.

RETAS! Pro and After Effects were used for combining 2D characters, hanging smoke, rock, and natural objects. These made it possible to fine-tune the arrangement and eliminate any oddness.

CONTRIBUTORS

Director: Takao Kato

Yoshihiko Marutani, Masakazu Kubo,

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12 In the Body

PRODUCER:Savage Frog!

SUMMARY

Savage Frog! worked up this short piece depicting a body factory worker dealing with a potential crisis.

All of the modeling, animation and rendering was done using NewTek's Lightwave 3D.

CONTRIBUTORS

Storyboard, Set Modeling, Texturing, Lighting, Camera: Ken Sullivan Character Modeling, Animation: Paul Davies

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DOCUMENTARY

13 Computer Reconstruction: Temple Site at Phimai

PRODUCER Richard M. Levy

SUMMARY

A United Nations World Heritage site, Phimai is a walled complex of reconstructed temples, libraries and ancillary structures, one of the most important Khmer monuments in Thailand. Reconstruction of the temple site serves as a case study highlighting the potential of computer visualization as a tool in heritage resource management. Besides offering archaeologists, historians and museum curators a non-evasive environment for testing reconstruction scenarios, virtual worlds offer the public access to important

historic monuments without the wear of excessive visitation.

CONTRIBUTORS

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14 Considering an Exotic Pet?

PRODUCER Skye Carlson

SUMMARY

A predatory reptile makes a cute pet when it's young, but can it be fun to eat from a can instead of catching food on the hoof? And what if the owner

gives up trying to care properly for it? Only really well prepared people can take care of an adult exotic pet well enough to give it a pleasant life.

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15 Synthesizing Sounds from Physically Based Motion

PRODUCER James F. O'Brien

SUMMARY

This video demonstrated our technique for approximating the sounds that are generated by the motions of solid objects. As the motions of the objects are computed, their surfaces are analyzed to determine how the motion will induce acoustic pressure waves in the surrounding medium. Our technique computes the propagation of those waves to the listener and then uses the results to generate sounds corresponding to the behavior of the simulated objects. Further details are provided in our paper in the SIGGRAPH 2001 proceedings.

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16 DAB: Interactive Haptic Painting with 3D Virtual Brushes

PRODUCER Vincent Scheib

SUMMARY

This video presents the system described in the SIGGRAPH 2001 paper by the same name. We attempt to capture the sight, touch, and feeling of the artistic painting process by providing the traditional tools of a painter. This allows anyone to control a virtual brush as a real brush. To achieve this, we have designed a physically based, deformable, 3D brush model and bidirectional, two-layer, paint model. These allow the user to produce complex

brush strokes intuitively. The haptic feedback enhances the sense of realism and provides critical tactile cues.

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17 Desert H2Ouse

PRODUCER k+d.lab

SUMMARY

Conceived as a critique of traditional architectural flythroughs and perhaps a glimpse into the future of online environments, this short film documents the investigation of an abandoned house from multiple points of view. The camera movement was accomplished through four layers of motion capture data via the mouse.

CONTRIBUTORS

Director: Joseph Kosinski Design/Animation: Joseph Kosinski Titles/Graphics: Dean DiSimone Sound Design: Jeff Kosinski CONTACT:

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18 Capitol Zoom

PRODUCER Gregory W. Shirah

SUMMARY

Capitol Zoom is a seamless, cloudless, zoom-in from a global view down to the nation's Capitol. Composed entirely of real earth-observing satellite data. Included are IKONOS 1 meter data, Landsat7 15/30 meter data, Terra/MODIS 250 meter data, and Terra/MODIS 8 kilometer data. The visualization first zooms in seamlessly, then zooms out showing where the different data set layers reside.

This visualization was created using Maya for motion control, Renderman for rendering, IDL for preprocessing of the data, Imagine for image registration, and Photoshop for color matching.

CONTRIBUTORS

Director: Stuart Snodgrass Gregory W. Shirah, Horace G. Mitchell, Marte Newcombe, Michael Mangos, James W. Williams, Alex Kekesi, Stuart Snodgrass

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19 New Baiyun International Airport, Guangzhou City, China

PRODUCER Jeff Coleman

SUMMARY

The Chinese government needed a public relations tool to promote this completely new major airport construction project to airline customers worldwide. A seven-minute video shows how a passenger would travel from curbside through the terminal to aircraft boarding. Arriving passengers are seen passing through to the baggage area.

The architectural staff created the 3D exterior shell in FormZ. The animation staff detailed the interior using 3D Studio MAX. The 3D model was created and rendered using five-dual 933 PC's, the animation is 10,800 frames long and required six weeks to build and render.

CONTRIBUTORS

Animation: Michael Bogatin Models: Curt Coleman, Jim

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Video Editor: Charles Parsons Photoshop: Al Torres Jr. Architectual Design: April Yana.

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20 Wing 2001

PRODUCER Yusaku Toyoshima

SUMMARY

This is a TV commercial for a new brassiere. We created a charming virtual idol to make the brassiere attractive.

CONTRIBUTORS

Director: Kei Yoshimizu Yasuhiro Otsuka, Shinya Kohno,

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21 Courthouse With Curved Elements

PRODUCER Takehiko Nagakura

SUMMARY

This prototype house is one of a series of courthouse designs made by Mies van der Rohe in the 1930's. The CG film team took the original schematic design that survived on a plan drawing, achieved a derivative version by adding components similar to those found in other projects designed and built by the architect and developed a visualization utilizing radiosity-based software. The camera moves between and around the uniquely shaped elemental walls and reveals the pleasure of developing

scenes full of material colors and the ambiance of sunlight.

CONTRIBUTORS

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22 The Book of Pooh

PRODUCER Robin Seidon

SIIMMARY

The Book of Pooh incorporates the mesmerizing look of Bunraku, a form of Japanese puppetry that dates back 300 years, combined with realtime CG virtual sets of the entire Hundred Acre Wood.

CONTRIBUTORS

Director: Mitchell Kriegman

Paul Lacombe. Cabot McMullen, Chris Renaud, Bob Taylor, Jens Scott,

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COMEDY - THE RETURN

23 Comics Trip

PRODUCER SUPINFOCOM

SUMMARY

A little boy goes to a birthday party....with his imagination!

CONTRIBUTORS

Director: Christophe Barnouin, Nathalie

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24 Kami

PRODUCER SUPINFOCOM

SUMMARY

A piece of paper is looking for friends....

CONTRIBUTORS

Director: Lionel Catry

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Pautot

Music: Patrick Ghienne

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25 Tabasco Commercials

PRODUCER UPSTART! Filmproduction GmbH

SUMMARY

Four commercials for Tabasco green pepper sauce produced in film resolution for cinema release in Europe.

Character modeling and animation using 30 Studio MAX with Character

Studio, compositing of various rendered layers in After Effects and Shake.

CONTRIBUTORS

Director: Bodo Keller

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26 The Turing Test

PRODUCER Mark Sagar

SUMMARY

Artificial intelligence computer algorithms compete with each other in a game show setting where they attempt to pass the Turing Test and be accepted as human. The work represents a new paradigm in computer generated filmmaking. The realistic 3D human-like digital actors were recorded in real-time directly from the display of a standard PC. The characters' dialogue was created with a text to speech engine or automatically synchronized to real voice audio clips. The digital actors were directed using a markup language to describe behaviors and expressions with real-time interactive playback.

Software: LifeF/X

CONTRIBUTORS

Paul Charette, Greg DeCamp, Brad Kalinoski, John Wallace, Alexander Pouchkarev, Mayumi Shimokawa, Diana Lynn, Justine Sagar

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27 Hubert's Brain

PRODUCER Nina Rappaport

SUMMARY

Cornered by a bully on a class trip to the museum, Hubert Stinkler gets locked into a laboratory where he literally stumbles onto a talking brain in a jar and gets mixed up in a bizarre tale of vivisection and mayhem. Hubert's Brain is a twisted buddy movie starring a boy and a brain. Each will go to

great lengths to prove the values of friendship. The story gives new meaning to the phrase "everybody needs some...body."

Software: Maya, Shake

CONTRIBUTORS

Director: Phil Robinson

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28 Hessi James

PRODUCER Martin Burkert

SUMMARY

In the desert of Arizona two cowboys meet for a most unusual duel. A 3D computer animated short film.

Software: Maya

CONTRIBUTORS

Director: Johannes Weiland

Story: Badesalz

Animation: Johannes Weiland Score: Thomas Mehlhorn

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SCIENCE FACT/FICTION - THE RETURN

29 Horses On Mars

PRODUCER Eric Anderson

SHMMARY

3.6 billion years ago, a microbe is blasted off its home planet from a meteor impact and embarks on a journey through the inner solar system. After spending time on other worlds, it decides home is best and tries to

return, only to head in the wrong direction by mistake. Unable to ever return again, it has a stunning vision of home, and what lies ahead for it. The imagery mimicks the look of electron microscope imagery.

CONTRIBUTORS

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30 Freeware

PRODUCER Mike Kaczmarek

SUMMARY

Visually stunning and action packed, Freeware is a 3D, CG animated thrill ride through a futuristic world. This sci-fi short follows three cyborgs on a daring race to rescue Maia, an assistant at a powerful IT company, from the grips of its evil CEO.

Software: Maya

CONTRIBUTORS

Director: Alex Orrelle

Supervising Technical Director: Andres Martinez; Art Director: Jed Diffenderfer; Shading Supervisors: Tadao Mihashi, David Lipton Animation Supervisor: Kate Cole; Lighting Supervisor: Erik Smitt, Maria Yershova; Visual Effects Supervisors: Brian McClure, Mark Manfrey Compositing Supervisor: Dan Cayer; Sound Supervisor: Genevieve

Freckelton; Music: Andrew Leung; Voice of Porter: John Rothman Voice of Angela/Maia: Sabrina Schlumberger; Voices of Corp Soldiers: Mike Kantor; Animation Supervisor: Gabriel Schlumberger; Editor: Bryan Poon

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31 Exploring Serotonin in the GI Tract

PRODUCER Peter Korian

SUMMARY

IOMedia, in collaboration with Intermed Media Inc. created this interactive presentation for the healthcare company, Novartis. The presentation, geared towards medical doctors, explores the relationship between the enzyme, serotonin, their receptors in the gut, and Irritable Bowel Syndrome. The purpose of the presentation was to visually convey this complex, yet fundamental mechanism in hopes of creating new therapies for the treatment of IBS. Extensive knowledge of the workings of the gastrointestinal system and associated neural network was required in order to accurately depict the abstracted, microscopic spaces.

All visual design, animation, compositing, editing and interactive design were performed in-house.

CONTRIBUTORS

Director: Eric Rosemann Gregory Amos, Dan Burt, Eugene Carroll, Ildar Istarki, Steven Korian, Benjamin Kou, Marc Lafontant, Michael Lasker, Benjamin Pir, Gregory Wallach, Steven Wood, Cindy Yang, Manchiu Yeung, Peipei Yuan

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32 Oblivious

PRODUCER Ringling School of Art and Design

SUMMARY

We tend to be unaware of other worlds that exist and how our actions impact their inhabitants.

CONTRIBUTORS

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33 Knitwear Rendering

PRODUCER Heung-Yeung Shum

SUMMARY

Knitwear rendering presents a significant challenge because of many detailed characteristics, such as the microstructure of yarn fibers, variations in stitch patterns, and shape irregularities. In our SIGGRAPH 2001 paper, we address this rendering problem by introducing a modeling primitive called the lumislice, which represents a yarn cross-section. By propagating a lumislice over a knitwear skeleton and adding soft shadow effects, we are able to synthesize realistic images of knitwear over various levels of detail while capitalizing on transparency-blending hardware. The results of our

technique are exhibited in this video and compared with real footage.

CONTRIBUTORS

Director: Baining Guo

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34 X-Men: Mystique Transformations

PRODUCER Lauren Shuler Donner, Ralph Winter

SUMMARY

For X-Men, Kleiser-Walczak artists developed a new 3D morphing technique for transforming various live action characters into the evil metamorph Mystique. CG keyframe and procedural animation formed the basis of visual effects that were seamlessly integrated with Rebecca Romijn-Stamos' performance and Gordon Smith's practical make-up.

CONTRIBUTORS

Director: Bryan Singer; Special Visual Effects: Kleiser-Walczak; Visual Effects Supervisor: Frank E. Vitz; Visual Effects Producer: Erika Walczak; Lead Animators: Scott Palleiko, Kody Sabourin; Animators: Derald Hunt, Beau Janzen, Alisa Loren Klein, Jeffrey A.W. Lew, Rickard Soderstrom; Compositors: G.G. Heitmann Demers, Douglas Aiken; Modeler: Stephen

Mann; 2d Artist: Kseniya Hoppe; Render Manager: Tom Hendrickson; Film Manager: Martha Small; Production Coordinator: Santo Ragno; Technical Consultant: Daniel Roizman; Technical Advisor: Jeffery A. Williams; Visual Effects Advisor: Jeff Kleiser; Special Thanks: Bryan Singer, Lauren Shuler Donner, Ralph Winter, Rich Thorne, Mike Fink. Twentieth Century Fox

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Antarctica: A Flying Tour 35 of the Frozen Continent

PRODUCER Wade Sisler, Michael Starobin

SUMMARY

For 18 days during the Southern Hemisphere spring of 1997, a NASAlaunched Canadian satellite called RADARSAT collected pieces of a puzzle that will help scientists study the most remote and inaccessible part of the earth, Antarctica. Scientists have now put the puzzle pieces together to form the first high-resolution radar map of the mysterious frozen continent. With detail to the point of picking out a research bungalow on an iceberg, this new map has answered scientist's questions about the icy continent, and has also raised new questions about strange and fascinating features never seen before.

CONTRIBUTORS

Director: Alex Kekesi Ken Jezek, Marte Newcombe, Stu Snodgrass

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36 **Evolution of the Universe:** Large-scale Structure and Galaxy Formation

PRODUCER Donna Cox. Tom Lucas

SUMMARY

Visual excerpt from the PBS HDTV "Runaway Universe", courtesy WGBH-NOVA and Tom Lucas Productions. The Adaptive Mesh Refinement simulation grid automatically refines into subgrids to develop small-scale features, generating over half a terabyte of data. We see gravitation forming nested hierarchies which vary many orders of magnitude. Tiny fluctuations in the density of the early universe are amplified into a network of interconnected filaments. Condensing gas clouds give birth to new stars and merge into whirling galaxies which congregate, collide, and interact in a fiery cosmic dance.

CONTRIBUTORS

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Robert Patterson

Cosmological Adaptive Mesh Refinement Simulation: Michael Norman, Brian O'Shea, Greg Bryan, Grand Challenge Cosmology

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