

DIMENSION

The Newsletter of the L.A. ACM/SIGGRAPH

February 2000



L.A. ACM/SIGGRAPH Presents
Tuesday, February 8, 2000



(Let There Be) Lighting

A Revolution in the Making: CGI Lighting and Cinematography Held in Association with Panavision

Here we are in the year 2000. Our community uses CGI lighting tools daily which are based on 30 years of development. We can anticipate the intersection of two previously separate disciplines: digital lighting and live action cinematography. New aesthetics are being born swiftly via technical developments as seen in the effects work of feature films such as "The Matrix" and "Fight Club".

The Program

Social Hour: 6:30 - 7:30

Presentation: 7:30 - 9:00

The Location

UCLA Freud Playhouse

Theater

MacGowan Hall

UCLA Campus,

Westwood

Directions

From the 405,
exit Sunset Blvd
East. Right at
Hilgard. Right at
Charring Cross.

Parking

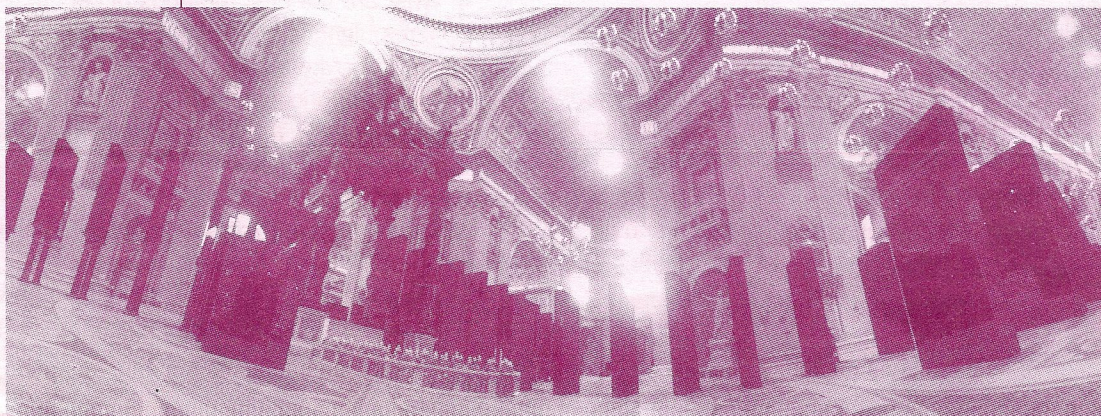
Parking in Structure 3 (\$5 per car). Follow pedestrian signs to Freud Playhouse or MacGowan Hall.

Fees/Registration

The event is free to L.A. ACM SIGGRAPH members and \$10 for non-members.

New members who sign up on-site and pay the \$25 annual membership fee (checks or cash only) do not have to pay the \$10 fee.

Special Thanks: Diane Piepol,
Genny Yee, Alan Lasky,
Frank Dutro, Jackie Morie



"Fiat Lux" directed by Paul Debevec employed image-based modeling, rendering, and lighting in an abstract dramatization of the conflict between Galileo and the church. The geometry, appearance, and illumination of the environments were acquired through digital photography and augmented with synthetic objects to create the animation. This panoramic image of the film's main environment features a virtual reconstruction of St. Peter's Basilica. Image copyright 1999 Paul Debevec.

In the CGI world, we are working within an evolving organic process, technically and aesthetically. As artists and technicians we strive to improve the quality of visuals we create and disseminate. We know the challenge of matching CG elements to live action plates. Repeatedly, we perform "magic" by matching the lighting of synthetic CG to real world light. What are the current best methodologies for doing so? And what of future tools? Get ready. An expanded set of tools to assist with this marriage are in development.

The overlap has already begun in the field and in practice. How will the workflow and production pipeline change for cinematographers and digital artists on? Cross pollination and cross training are underway. Buckle your seatbelts. Expand the dialogue. Join us for a panel discussion focused on how the two disciplines work together now to solve those critical light matching issues.

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UPCOMING MEETINGS

Tuesday, March 9, 2000. WebWorks.
WebWorks will explore the latest technical functions and artistic achievements for utilizing CGI on the Internet and within several areas of convergent media.

Tuesday, April 11, 2000. Muscle Tech.
See what CGI has contributed to the visualisation of muscles in both film and medical worlds

Call the SIGPHONE, 310-288-1148

For recorded information on the time and location of our next meeting.

Dimension Advertising Specs:

\$5 per line (~70 char/line)

1/4 Page (3.75"x 4.75") \$100

1/2 Page Horiz. (7.5"x 4.75") \$200

1/2 Page Vert. (3.75"x 9.75") \$200

Full Page (7.5"x 9.75") \$400

Accepted Media and Formats:

2) Zip, Jazz, Quark, FreeHand, Illustrator, Photoshop, TIFF, and EPS. Make sure to include all linked images and fonts. Macintosh format. For Media, include a self-addressed, stamped envelope for return.

Send your check made payable to:

Treasurer L.A. SIGGRAPH
Frank Solomon, Advertising Coordinator
L.A. ACM/SIGGRAPH P.O. Box 9399
Marina del Rey, CA 90295

Send your ad to:

Lynn Kaplan Dimension Art Director.
Ads under 10MB can be accepted via e-mail at: lynn180@earthlink.net. Ads over 10MB, please mail to: ONEighty 1119 Colorado Ave Suite 103 Santa Monica, Ca 90401

For Media, include a self addressed, stamped envelope for return.
Ads will be inserted upon receipt of payment.

Ad submission deadlines are six weeks before date of Issue.

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Speakers will feature Tim McGovern independent visual effects supervisor, Paul Debevec research scientist and filmmaker at U. of California Berkeley, and a feature film director of photography (to be announced) Alan Lasky of Panavision will act as moderator.

We will explore the following topics:

1. What is the real world working relationship between the cinematographer and the digital effects crew when striving for a consistent 'look' in the lighting of a movie that requires integration of live action and CG elements? Whose responsibility is it currently?
2. Does it make sense to keep the Director of Photography on a film to consult with the CGI crew in much the same way the DP is brought in for color timing?
3. What are the greatest impediments (technical, logistical) to creating believable matches between CGI lighting and real world lighting?
4. What are the best methods of capturing the lighting data on set? Spheres, lighting plans, contrast ratios?
5. Are the state of the art rendering tools really good enough to match real world lighting?
6. Can we define a 'lighting standard' in software that matches real world lighting units to their CG equivalents? Is this possible and practical?
7. Should software/effects companies create lighting tools that are more "film-like"? What benefits are there for cinematographers in learning the digital tools as they stand now?
8. In the near future what cross-discipline light matching tools are most likely to come into regular use?

OUR SPEAKERS

Paul Debevec

University of California Berkeley
Paul Debevec is a research scientist and filmmaker at the University of California at Berkeley. His research combines digital photography with computer graphics: creating 3D camera moves from 2D photographs, illuminating synthetic objects with real light, and realistically combining real and computer generated imagery. Using these techniques he has directed several internationally exhibited computer animations including "The Campanile Movie", "Rendering with Natural Light", and "Fiat Lux" which have premiered at the SIGGRAPH Electronic Theater. Recently, Debevec's virtual cinematography techniques were employed at MANEX Entertainment in creating the "bullet time" shots for the movie "The Matrix". His current work involves applying image-based lighting techniques to digital filmmaking, virtual actors and sets, and the documentation of archaeological sites. He received his Ph.D. in computer science from University of California Berkeley in 1996.



18 layer
composite from
Feature Film
"Stigmata"
Gabriel Byrne
carries Patricia
Arquette through
a room engulfed
in fire

Stigmata - MGM
© 1999

Tim McGovern

Independent Visual Effects Supervisor

In 1978, Tim completed degree work at University of Illinois at Chicago with a double major in Graphic Design / Photography and a minor in Art History. While at the University of Illinois, Tim started work as a graphic designer at WTTW, a Chicago public television station. It wasn't long before a move to Los Angeles was motivated by an offer to work at a new division of ABC, specializing in on-air animation and graphic design.

The work at ABC was exciting, but the lure of computer-controlled cameras and computer-generated imagery proved irresistible and soon brought him to work at the legendary Robert Abel & Associates. Within six months Tim was working with a group of three others for five months creating a fifty-five second sequence of computer animation for Walt Disney's "TRON".

In 1987, Tim and a group of former employees from both Cranston Csuris and RA&A founded MetroLight Studios. There he worked for five years as a Visual Effects Supervisor collaborating with directors James Cameron, David Lynch, and Paul Verhoeven. In 1989, Tim supervised the computer-animated work for Carolco Picture's "Total Recall". Tim won an Academy Award for his work on the Skeleton X-ray sequence in that film, which once again involved human motion and CG characters. The work was recognized for the fluid and realistic motion of the film's nine humans and one dog. Tim was the first Visual Effects Supervisor with a CG or digital background to have his work recognized with an Academy Award.

In 1992 Tim founded Sony Pictures ImageWorks with seven others and functioned as both a Senior Visual Effects Supervisor and as the Senior Vice President of

Creative and Technical Affairs. Tim personally supervised "Last Action Hero", "Hideaway", "Virtuosity", "Money Train", "The Ghost & The Darkness", and "As Good As It Gets".

Tim left Sony Pictures ImageWorks as his interests turned to developing screenplays. He is currently pursuing this both as a director in conjunction with writers and as a writer/director himself. In August he completed a nine-minute short based on one of his films in development. Tim also served as an independent Visual Effects Supervisor on both "Stigmata" in 1998 and "Supernova" in 1999 for MGM.

Alan Lasky

Panavision, LIDAR Division

Alan Lasky holds an undergraduate degree in Cinematography from New York University and a Masters Degree in Media Technology from Massachusetts Institute of Technology's Media Laboratory. Alan worked as a camera person on the east coast for 5 years on several feature films and commercial productions. After graduating from the Media Lab, Alan began working as a digital effects technician on feature films and commercials. His credits in digital effects include: "Last Action Hero", "Demolition Man", "True Lies", "Wolf", "The Shadow" working at such facilities as: R. Greenberg and Associates, Digital Domain, Rez-N-8, and others. Recently Alan worked for three years for Silicon Graphics Inc. in the new technology and training divisions developing new systems and methodologies for digital film production. He currently heads the LIDAR (Laser Radar Imaging) scanning division at Panavision.