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DESIGN FEATURES

22 2001 IALD Lighting Design Awards

Award of Excellence

24 American Museum of Natural History, Rose Center for Earth and Space

Awards of Merit

- 26 Alexander Graham Bell House, British Telecom Regional Headquarters
- Fußgängerbrücke (Pedestrian Bridge) 27
- 28 Herz Jesu Kirche (Heart of Jesus Church)
- 29 Millennium Dome
- 30 Module VII Chiller Plant, University of Pennsylvania
- 31 Raleigh/Durham Airport Parking Structure
- 32 San Francisco City Hall

Special Citation

33 The New 42nd Street Studio Building

POST-LIGHTFAIR REVIEW

- 34 Technology Report
- 38 Leaving Las Vegas-Opinions from the Show Floor
- 42 New Product Showcase

EUROLUCE 2001

44 Eye on Design

DEPARTMENTS

- 6 **Editor's Note**
- 8 Feedback
- 10 News
 - 10 The Inbox
 - 17 Datebook
- 18 Profiles Charles G. Stone II, IALD
- 48 EndPoint Place Your Bets!



LIGHTFAIR REVIEW



EUROLUCE

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editor'snote

This post-Lightfair issue of *Architectural Lighting* can be subtitled "The Week in Review," as it thoroughly covers the many days (and nights!) recently spent in Vegas at this year's show. On the following pages, the editors report on both award-winning projects and products, and share with you our "notebook" of technology and design trends from the show floor—to refresh your memory or maybe to alert you to something you may have missed. After all, so many booths, so little time.

Also, new this year, we've included some opinions *from* the industry about Lightfair



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2001. We rounded up a group of attendees and posed questions about what inspired, satisfied-and disappointed-them. Find out their responses on page 38 and see if you agree with their assessments and what they're hoping to see at next year's show. Speaking of which, let me take the opportunity to mention that Lightfair 2002 will be held June 2-5 in San Francisco. I'm underscoring that point here to put to rest any of the confusion and misinformation that had been circulating as to the "news" that Lightfair was not returning to the Bay City in '02. Forget what you've heard. It is.



On a final note, I would like to give credit to the folks at E-Lite Technologies, Inc. for the signage depicted in the photo above. This year's Lightfair attendees probably had an easier time finding their way to Architectural Lighting's booth thanks to the 15-x-2-ft. illuminated sign that was provided by the company. A product of large-format electroluminescent technology, the sign consists of the company's Flatlite EL lamp, which measures ²⁸/1000 in, thick and is now available in 32-in.-wide and 200-ft.long master rolls. 御





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To the Editor:

Truckloads of roses to you and your team for the March 2001 issue of *Architectural Lighting*! As one of the old-timers from the supply side of architectural lighting (began c.1951), I have been blessed to remain around long enough to see lighting design mature as a profession and its related supply side as a respected industry.

I was somewhat disappointed, however, not to see Claude Engle included as one of the "Living Legends." It could lend some credence to the "New York



US5 800.838.7446 www.ushio.com Fraternity" myth, but consider this comment as coming from a devout non-New Yorker. Claude has probably spawned more successful and skilled lighting professionals than anyone since Ed Kook (under whom Claude cut his teeth in lighting). These would include Charles Stone, Peter Barna, George Sexton, to name only a few. His innovative designs (The Louvre, National Gallery of Art, The New Reichstag, Shanghai & Hong Kong Bank, Tokyo Forum, Stanstead Airport-just for openers) cover a 35+-year career. I could go on, but further research can fill it out. Again, keep up the good work; I thoroughly enjoy each issue.

Dick Dunlop Chesapeake Lighting Associates, Inc.

To the Editor:

After a few years absence (due to moving around a lot), I finally got around to renewing my subscription to *Architectural Lighting* today. Every time I run across old issues, it amazes me how consistently excellent your magazine is. The artwork, graphics, selection of projects, everything about *Architectural Lighting* is stunning. I had been wondering if you guys have been maintaining the consistent level of quality, but the thumbnail photo of the Rose Center issue on your website gives me a clue that the magazine is still just as beautiful.

I don't know whether your staff gets a lot of compliments (I suspect they do), but please add mine to the list. There is a certain dignity and respect that goes along with trying to make one's little corner of the world a better place, and you have certainly earned my respect over the years. I'm glad your team does such a great job and I will be honored to get your magazine back on my bookshelves.

Rod Burrows, PE, AIA (via email)

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HOT DAM! HOOVER IN A NEW LIGHT

On May 30, during Lightfair, key representatives from Osram Sylvania and Hydrel and editors from several industry trade magazines (*Architectural Lighting* was there!) traveled to the Hoover Dam to witness firsthand the relighting of the spectacular man-made wonder, which replaced the yellow glow of HPS lamps with the crisp, white light of metal halide.



Before & after: The Hoover Dam's 60+ HPS fixtures were replaced with metal halide floodlights for crisp white light, improved control and optics.

The old lighting system was installed in the early 1970s and

consisted of 24 1000W HPS fixtures and 40 400W HPS fixtures, for an overall system load of 45,000 watts. The new system, which aesthetically enhances the appearance of the massive structure, consists of 32 1000W compact jacketed metal halide fixtures for an overall system total of 34,560 watts. This generates a savings of 10,440 watts, or the equivalent of 23 percent, with only half the number of lamps to replace in the future.

The combination of Sylvania's compact, high-color-rendering Metalarc 1000W metal halide lamps—which provide increased system efficiency due to a smaller outer jacket and offer better control and better fixture optics, according to the company—and Hydrel's 7200 Series architectural floodlighting system create a dramatic effect that will allow the 1+ million visitors to see the Hoover Dam in a whole new light. "We have received numerous positive comments on this new lighting system," said Harvey Boyce, a Reclamation public utilities specialist and thirdgeneration Hoover employee. "In this era of electric power shortages in the western states, every kilowatt-hour saved by reducing our plant losses provides more energy to our consumers," said Boyce.

Hoover Dam, the greatest dam of its day, is considered to be one of the top civil-engineering facilities in the world. Named for the 31st President, Herbert Hoover strongly supported the construction of a high concrete dam on the Colorado River to control its flows, provide irrigation to nearby farmlands and offer a dependable water supply for Arizona, California and Nevada. He advocated that the project be self-supporting, financed primarily through the sale of hydro-electric power generated at the dam. powerplant continue to be funded principally from revenues from power sales to 15 public utilities, municipalities and state agencies in Arizona, California and Nevada.

The construction of the

Hoover Dam was the first of

several large reclamation

projects to be built along the

Colorado River. It backs up

the waters of the river to form

Lake Mead, the largest man-

made reservoir in the U.S. In

1935, the 726-ft,-tall structure

was dedicated by President

Franklin Roosevelt. To this

day, operation and main-

tenance of the dam and

The Hoover Dam's power and valve houses also will be using Sylvania's metal halide lights and also will result in a reduction in fixtures, power consumption and maintenance costs. The new lighting system also offers other benefits including colored filters that can be used to change the color and appearance of Hoover's facade for special events.

Fun Facts

• Rising 726 ft. above the raging waters of the Colorado River, it was called by the man whose name it bears "the greatest engineering world of its character ever attempted by the hand of man." In the midst of the Great Depression, the Hoover Dam was a symbol of hope for the dispossessed.

• The project's electrical output helped build ships and planes used in WWII while its water grew fruits and vegetables in California. It tamed a wild river and for a time, renewed faith in America ingenuity and technology.

• There are 2,700 miles of transmission lines sending electricity from Hoover Dam to Los Angeles.

• Each of the 17 generators can supply electricity to 100,000 households.

• When operating at full power, the 17 generators can supply all the electricity needed by a city of 750,000 people.

• Las Vegas gets almost all its water from Lake Mead. Lake Mead was made by Hoover Dam when it blocked the Colorado river and flooded the Mojave Desert.

JJI LIGHTING GROUP SELLS .HESSAMERICA

Four years after creating the U.S.-based .hessamerica, as part of an agreement with Hess Form+Licht of Germany, the JJI Lighting Group has announced that is has sold its ownership in the company to its German namesake. According to JJI Chairman and CEO Robert N. Haidinger, who made the announcement, assuming complete ownership of the .hessamerica subsidiary will enable Hess

Form+Licht to enter the U.S. market directly.

Terrance O'Toole will continue to serve as VP and general manager for .hessamerica, which will continue to operate from its manufacturing and administrative facilities in Shelby, NC through 2001. To contact the company, phone (704) 471-2211, fax (704) 271-2255 or visit the company website at www.hessamerica.com.

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NUCKOLLS FUND ANNOUNCES NEW 2001 GRANTS

The Nuckolls Fund for Lighting Education has announced the award of two grants for 2001, each in the amount of \$20,000. The announcement was made on May 30, 2001 at the Fund's annual luncheon at Lightfair.

A grant was awarded to the University of Florida to support the

development of a Lighting Master Studio, an interdepartmental course for graduate students. The course will be integrated into the lighting curricula of the master programs in the School of Architecture, Department of Interior Design and Department of Theater and Dance.



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The second of the 2001 grants was presented to California Polytechnic State University at San Luis Obispo for the development of a lighting fundamentals course for third- and fourth-year architecture students. The course will be offered as a required design studio with a seminar component.

This year, the Nuckolls Fund did not award an Edison Price Fellowship because no fundable proposal was submitted. However, for the upcoming year, the Board of Directors plans to expand efforts to reach educators who are strong candidates for the fellowship, which is currently funded at \$7,500. For more information, visit www.nuckollsfund.org.

STRAND MOVES

After nearly 20 years in Rancho Dominguez, CA, Strand Lighting began operations in its new offices and manufacturing facility in Cypress, CA on June 25. The plant features expanded manufacturing capabilities for all of the company's 120V products including SL spotlights, CD80, SLD dimmers and customproject manufacturing. The new facility is located at 6603 Darin Way. Cypress, CA 90630, phone (714) 230-8200, fax (7140 889-0042. For more information, email Peter Rogers at progers@strandlight.com, or visit www.strandlighting.com.

MAGNETEK GOES

MagneTek Lighting Products has changed its name to Universal Lighting Technologies, which was subsequently acquired by Littlejohn & Co., LLC, a private investment organization. Universal Lighting Technologies will remain focused on the core values of its predecessor companies. Universal Manufacturing and Triad-Utrad. For more information, phone (615) 316-5100 or visit www.universalballast.com.

GE LIGHTING ANNOUNCES EDISON AWARD WINNER

GE Lighting has awarded the 2000 GE Edison Award for excellence in lighting design to Washington, D.C.-based George Sexton Associates for the lighting of the Herz Jesu Kirche (Heart of Jesus Church) in Munich, Germany. A personalized Steuben crystal award was presented to the design firm at a gala dinner reception held May 29 in Las Vegas.

Herz Jesu Kirche was chosen from six Awards of Excellence finalists, which included: the Seattle Space Needle, lighting design by Ross De Alessi Lighting Design; Irving S. Gilmore Music Library, Yale University, lighting design by Ripman Lighting Consultants; Telekom Service Center, lighting design by Lichtplanung Erwin Döring; The Wellcome Wing at the Science Museum, lighting design by Hollands Licht; and George Washington Bridge Towers, lighting design by Domingo Gonzalez Associates.

LITHONIA AND MUSCO FORM ALLIANCE

The Lithonia Lighting Group and Musco Lighting, a sportslighting manufacturer based in Oskaloosa, IA, have announced the formation of a national marketing alliance. Through the alliance, the companies will cooperate on certain projects to offer a package including lighting products, controls and installation services from both companies. The Musco sales force will continue its direct selling efforts in its primary markets while working exclusively with the Lithonia Lighting force to extend market access for the Musco product line.

THE WATT STOPPER ACHIEVES ISO 9001 CERTIFICATION

The Watt Stopper has announced that the design, manufacturing and distribution center for its panel division has achieved ISO 9001 certification. The facility is located in Warwick, RI. To contact The Watt Stopper, phone (800) 879-8585, (408) 988-5331.

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JEFFERSON MEMORIAL TO BE SEEN IN A NEW LIGHT

The National Park Foundation, the official nonprofit partner of the National Park Service, and Osram Sylvania have joined the National Park Service in a total relighting project for the Thomas Jefferson Memorial, one of Washington D.C.'s most notable and picturesque landmarks. The project, marking the 200th anniversary of the inauguration of the nation's third president and the 100th anniversary of Osram Sylvania will result in an energy savings of some 80 percent and will provide residents and visitors alike with an enhanced view of the building, its classical architecture and the monumental sculpture of Thomas Jefferson.

"The new lighting for the Jefferson Memorial ... is a fitting project as our birthday gift to America," said Dean Langford, president and CEO of Osram Sylvania, whose donation, valued in excess of \$800,000, was made to the National Park Foundation. "It's a perfect fit with our legacy of lighting, standing in testimony to our first 100 profitable years in the lighting industry, setting the course for our second century and providing a public service for the millions of Greater Washington residents and tourists who pass by and visit this landmark every year."

Designed and built between 1939-1943, the Jefferson Memorial was opened to the public in 1943 and is visited by more than two million people each year. The original design contained no exterior lighting. The current lighting, installed in the 1960s and '70s consists primarily of high-wattage incandescent lamps as well as HPS lamps that are used to illuminate the 19-ft.-tall Jefferson statue. While these light sources were technologically appropriate and state of the art in their era, there have been significant developments in lighting technology since then. With lighting design services provided by The Mintz Lighting Group Inc. of New York, the Jefferson Memorial will soon be seen in a whole new light—from its sheer volume to its most intricate details. Sylvania Metalarc HID metal halide lamps will be the primary light source used in the new scheme, supplemented by LEDs, which last up to 100,000 hours.

American architect John Russell Pope designed the white marble building, which consists of a domed structure encircled by 26 columns. The new lighting system will include illumination of the inside of the dome for the first time so visitors will be able to better appreciate the mosaic expanse of stone that stretches across the marbled rotunda nearly 92 ft. below.

Rudolph Evans, an American sculptor, designed the bronze statue of a standing Jefferson facing the White House across

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the Tidal Basin, a familiar scene to residents and visitors alike. Also in another first, the new lighting scheme will illuminate the face of the memorial facing the Tidal Basin, making the view from the White House and the Washington Monument crisper and more even.

Additionally, thanks to LED technology, the inscription on the text frieze—which features a famed and often quoted Jefferson thought—will become more legible. More than 12,000 of these small pinpoints of light, placed unobtrusively around the dome base inside a narrow ledge, will allow Jefferson's words on independence and freedom to be presented more prominently.

Other improvements will include the installation of new control gear, as well as the removal of all existing exterior lighting poles, many of which have become overshadowed by vegetation, creating uneven and obscured lighting effects on the memorial. New poles will be installed inside the tree line and will be equipped with floodlight fixtures and HID lamps to cast an even glow over the entire memorial.

The work is scheduled to begin this month and culminate in September. Look for expanded coverage of this project, scheduled for *Architectural Lighting's* August/September 2001 issue.

LIGHTFAIR RETURNS TO SAN FRANCISCO IN 2002

Lightfair International 2002 is scheduled to be held June 2-5, 2002 at the Moscone Center in San Francisco, CA. Next year's event will encompass a pre-conference on Sunday, June 2 and three days of exhibits and seminars. Seminars will run from June 3-5. For exhibit information, contact Libby Morley, executive director, phone (404) 220-2215, email: libbym@lightfair.com or Karen Scarpino, assistant trade show manager, phone (404) 220-2218, email: karens@lightfair.com. For conference information, contact Renee Gable, executive director, conference & marketing, phone (404) 220-2217 or Angela Ausband, conference & marketing manager, phone (404) 220-2221, email: angelaa@lightfair.com.



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NEW APPOINTMENTS, NEW FACES & A NEW FIRM

JJI Lighting Group CEO **Robert N. Haidinger** has retired from the company, effective July 1. He will continue, however, as chairman of the board of directors. **Richard J. Crossland**, appointed president of JJI Lighting Group in March, will be named CEO. Frank Grobmeier has been promoted to director of sales and marketing for Litetronics International.

Wesson M. Brown has been appointed Group VP of Hubbell Lighting's platform of businesses which includes: Hubbell Lighting Inc., Sterner, Security and Devine Lighting.



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Al Ridella has joined High End Systems as northeast regional sales manager.

Syska & Hennessy, Las Vegas has named **David Brantley**, **PE**, senior VP; **Hisham Barakat**, **PE**, **Robert Carley** and **Brittany Dianat** have been named VP at the Los Angels office.

Lightolier has appointed Michelle Troconis to marketing manager for Fibre Light U.S. LLC and Specialty Products Division.

LightWire, a Seattle-based architectural lighting design firm, has officially opened its doors for business. The firm's founders are Michael Sherer, formerly of J. Miller & Associates and Susan Rhodes and Denise Simpson, both formerly of Lumena Lighting Design. LightWire is located at 1904 Third Avenue, Suite 305, Seattle, WA 98101. For more information, contact Susan Rhodes at (206) 292-8177 or visit www.ltwire.com.

Ewing Cole Cherry Brott in Washington, D.C. has named **Paul G. Heflin, AIA** managing principal; **Kenneth S. Warwick, AIA**, director of architecture and **Christina Cornell**, director of interior design.

ON THE WEB

Effetre USA has announced the launch of its website at www.effetreusa.com. Effetre USA can be contacted at 980 N.E. 126th Street, North Miami, FL 33161; phone (305) 891-4001, fax (305) 891-0605

CORRECTIONS

In the article, "Forum—Specifiers Speak Out," which appeared in the 2001 Market Issue, lighting designer Nelson Jenkins of Ann Kale Associates was incorrectly identified as Neil Jenkins.

Architectural Lighting greatly regrets the error.

datebook

2001 SCHEDULED EVENTS

August 5-8 2001 IESNA Annual Conference, Ottawa, Canada. Contact: Valerie Landers at (212) 248-5000, ext. 117.

September 5-9 CEDIA Expo 2001, Indiana Convention Center & RCA Dome, Indianapolis. Contact: (800) 669-5329, www.cedia.org.

September 11-14 China International Lighting Exhibition 2001, Shanghai Everbright Convention & Exhibition Center, Shanghai, China. Contact: (301) 424-7060.

September 13-14 IIDEX/NeoCon Canada, The National Trade Centre at Exhibition Place, Toronto, Ontario, Canada. Contact: (800) 528-8700, www.merchandisemart.com.

September 23-25 World Workplace 2001, Kansas City, MO. Contact: (713) 623-4362.

October 3-5 Light 2001: IX International Fair of Lighting Equipment and Electric Fittings, Warsaw, Poland. Contact: (48 22) 649 76 69, 649 76 71, fax (48 22) 649 76 83, 651 00 58.

October 14-17 IESNA Street & Area Lighting Conference, Orlando, FL. Contact: Valerie Landers at (212) 248-5000, ext. 117.

October 17-19 LED 2001, Hyatt Islandia Hotel, San Diego, CA. Contact: (207) 781-9615, email Jonathan@Intertechusa.com

October 31-November 1 NeoCon New York, Jacob K. Javits Convention Center, New York. Contact: (800) 528-8700.

November 2-4 LDI2001: 14th Annual Lighting Dimensions International, Orlando, FL. Contact: (800) 288-8606.

November 28-30 IALD Annual Meeting, Philadelphia. Contact: (312) 527-3677.

November 29-30 NeoCon West, Los Angeles Convention Center, Los Angeles. Contact: (800) 528-8700, www.merchandisemart.com.

Do you have any events you'd like our readers to mark in their datebook? Let us know!

Send your seminar, conference or trade show information to *Architectural Lighting* by faxing us at (646) 654-4482 or emailing aliao@billcom.com.



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Architectural Lighting interviews Charles G. Stone II, IALD, LC, managing and design principal for Fisher Marantz Stone, Inc. Stone received a Bachelor of Arts degree from Princeton University with a Certificate from the Program in Theater and Dance for lighting design. His experience encompasses architectural and theater and the

including concert halls, airports, convention centers, museums, hotels, theme parks, corporate headquarters and commercial developments throughout the world. He has received IALD Citation Awards for the New York Hospital for Special Surgery, the New Jersey Performing Arts Center and the National Yokohama Convention Center.

Projects receiving an IALD Award of Excellence include the National Gallery of Canada, 100 East Pratt Street in

Baltimore, the Islamic Cultural Center in New York City, Chek Lap Kok Airport in Hong Kong and, most recently, the American Museum of Natural History Rose Center for Earth and Space.

-Alice Liao

Q: If someone had asked you, "What do you want to be when you grow up," you would have answered...

A: I always knew what I was going to be when I grew up. When I was 11, I went to the Harrisburg Community Theater, worked backstage on the lighting, came home and announced that's what I was going to do. That's absolutely true. You can ask my mom.

Q: How did you make the transition to architectural lighting?

A: After Princeton, I thought I wanted to be a theatrical lighting designer, but a little summer stock and a couple of years in off-off-Broadway made me realize that there were only about five people who actually made a living doing that—one of them is Jules (Fisher), of course.

Then I was introduced to architectural

lighting. I went to see Sy Shemitz, who wrote me a letter that I still have somewhere. He pointed out to me the obvious truism: In theater, you design and build things that last perhaps two weeks or a year and in architectural lighting, it's 40 years. You need to understand and embrace that idea if you want to be an architectural lighting designer because if you come here and start working, it will be a few years before you start to see projects. So my advice to young lighting designers is if you have the patience to be an architectural 66 lighting designer, then come on board. But if you want to see it happen more quickly, work in theater, film or TV.

therefore, not much fun. People pay their doctors and phone bills, but they don't necessarily want to pay for professional services, such as ourselves. We try to work with people who are going to recognize that we bring value to a project and who will pay our bills. Usually, there are no problems, but when there are, it's an unpleasant part of the day. When you realize they have no respect for what you do, you wonder why they hired you in the first place.

Q: Are there issues that you're passionate about?

A: Well, I like to say that one person's glare is another person's glitter. Every time I think I understand appropriate brightness relationships and illumination techniques and results, I meet another person and I learn a different view. So that's ever changing. However, I have strong feelings when a project looks

right. That's usually when I get into the most trouble with clients. When we disagree on something fundamental in terms of how a project should look, either before it's designed, during the process or when it's too late, when it's built. I become very passionate. It's always the most frustrating time because sometimes I'm in disbelief that I can be wrong or that maybe I've misunderstood something. Of course, they should never hire us if they don't want the

... one person's glare is another person's glitter."

Q: What is the most intriguing aspect of your job? **A:** Trying to figure out what the critical details are. There is not enough time in the project schedule and in our days to work on everything and resolve every little detail. No one has time for that. Which are the most critical parts of the experience of approaching a building? What are the most beautiful places to stand? Which views are the most moving? And how will light play a part of it? We have a lot of projects underway in our office and it's the senior people who have to make sure that we've given proper attention to the right details. Which is why I'm never bored. I walk around in fear that I won't catch all the right details. It's a powerful motivator—fear.

Q: What do you hate about it?

A: Some of the business aspects are inconceivable and

passion and the point of view. But actually, most of the time, the problems are all traceable to communication. Our job is to listen to what clients want and then find a way to realize it, enhance it or to turn it around and show them a better way, some combination of that continuum.

Q: Communication seems to be an important issue for you...

A: One of the themes I've been focusing on in our office this year is thinking very hard at the *beginning* of a project about how to communicate your lighting ideas to the client, to colleagues and to the architect, because the nature of what we do is an abstraction. When you start to solve the problem, even before you put your pencil on the paper, you have to start thinking about how you're going to communicate the abstraction. What will the metaphors be? It's always about metaphors—you can draw the light,

(Continued on page 20)



elemental beauty

Distinctive designs from Lucifer Lighting Company – sleek fixtures with interchangeable elements and technologies for architects and designers. **Aero** [top], a retro-shaped spotlight that accepts multiple effects devices for precise beam control. The **Stealth** [center], a full cut-off L.E.D. or Fiber Optic fixture for illuminating steps or pathways. **Aura** [bottom], sparkling glass rings add a new dimension of color to our Java downlight series.

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(Continued from page 18)

but you can't hold it in your hand. You can't go there, because it's not built yet. You can take them to similar spaces or show them pictures, but there's great danger associated with that because when you show someone a picture of a space and say, "It's going to be like this," they may be looking at the flower arrangement. This happens all the time.

In fact, I think some of the success we have enjoyed has been due to our insistence on studying and perfecting communication techniques. I like to discuss with the client the process of communication, how it can be improved. One of the great assumptions that we make over and over again about our clients is that they can read the drawings. Very few people can actually look at blueprints and stand it up in their brains. It's not that they don't have the ability—it's just a skill you acquire through practice.

Q: What about computer programs?

A: Everyone's hooked on computer renderings—for good reason—and indeed, in projects like the American Museum of

Q: Is Caravaggio a source of inspiration?

A: Caravaggio is my favorite artist. There's great honesty in his use of light, which is one of the reasons his paintings are so moving. When I was in Milan three weeks ago. I spent time looking at a few of the Caravaggios in town. Studying where the light is in those paintings is a very relaxing and worthwhile exercise for a lighting designer. Everybody says it's a beautiful painting, but why is it so? If you had that little light in most projects, you'd get in trouble. And yet they're exquisite in their expression-the play of soft and sharp shadows, the angles of light. Three variables, right? Color, angle and intensity. Those are the three variables if you really boil down lighting.

Q: Do you derive ideas from other disciplines? Music? Literature?

A: Sometimes, the rhythms from music or patterns from mathematics or discussions about geometry will have a lot to do with how you think about ordering a building at obviously, the way the projects are conceived, detailed—all of that is different for every single architect.

Q: What did you think of Lightfair?

A: Each of these fairs has its own kind of personality because of the way the markets operate. One of the big differences between the U.S. market and European market, for example, is that the dollars per cubic unit of building in Europe is much higher than it is here, so there's more money sloshing around to pay for innovation. Consequently, at the European fairs, you tend to see more new things. They'll actually float a new product out there-and sometimes it's real vaporware-just to get a reaction. You don't see that as much in the U.S. not only because of the cost of building and available capital question, but also because there's a fear on the part of U.S. manufacturers that they're just going to get copied. So when you go to Lightfair, you have to snoop around for innovation. Every one asks us: What did you see that

"...we inhabit the mind of the architect that's our primary job."

Natural History Rose Center for Earth and Space, the computer enhanced our ability to imagine and enabled us to solve the problem the way we did. But computer visualizations of architectural spaces are dangerous things. The most basic technical facts stand in the way. Computer models are made from mathematical iterations and calculations and you can't run them out to infinity. You have to stop at some point. Everyone who uses them understands the shortcomings in the software, and in the industry, it's a wink and a nod. However, when you show computer models to your client, they don't understand the limitations of the rendering-that either on a monitor or printed out, you're looking in both cases at a limited number of values of gray scale. Two-hundred-and-fifty-five steps from white to black on a computer screen are just a fraction of what your eye is capable of. The dynamic range that your eye and brain can see and imagine is much greater than what you can show someone on a flat piece of paper or on a computer screen. All the subtleties of lighting are lost. There's a far more dynamic range, for example, in a Caravaggio painting than what's possible in a lighting program. In fact, in a Caravaggio, there's always black and if you look for it, you'll find almost absolute white. That's very interesting to me because it's an infinite scale.

some abstract level. It's hard to take that into practicality, but if they're strong and well-formed, those initial concepts can run right through a project. They can provide ideas, especially with regard to rhythms and patterns, because one of the ways that we look at a building is in terms of layers. For example, an entire arrival experience that takes you through a series of luminous zones can be associated with a musical rhythm or relate to math or simple geometries like Golden Sections or the Fibonacci series or other ideas from observations in nature.

Q: The most inspirational architects?

A: It is so much fun to work with many different architects and their styles. And because our job is to come in and enhance their work, we have to see through their eyes. Paul (Marantz) likes to say that we inhabit the mind of the architect—that's our primary job. Their first job is to bring us in on their communication set of tools, introduce us to them. We're all doing some of the same things, so there's a lot of similarity in the tools we use, but the stories they tell to explain the project, the metaphors they use, the images they show you, the style of their presentation, the references—historical and otherwise—and was new at the show? Did I see anything? Sure. Did I see a lot of innovation? No. I saw more of that at other places in the world this spring, which is a little discouraging, but that doesn't mean there won't be an American manufacturer who's going to figure out how to massproduce it first.

But actually, to a large extent, it's our job to innovate. I don't really care if I saw new things at the show because it's my job to come up with them. And I think that's what we try to do in each job. In each project, we are looking for places to innovate, because on a good day, each lighting project we come to in the course of a day is one that has a unique client, a unique program and a unique set of problems. That's presumably why they came to us. So it's our job to innovate something that maybe will be unique. I wouldn't expect to find it in a show.

Innovation is using a set of things in a new way. People appreciate that. In fact, they'll appreciate that more than designing a completely unique light fixture. If you can find a simple, ordinary set of lighting tools, existing fixtures to solve a problem in a new way, that's creative use of stuff. And that's good. That's what gets me up in the morning.

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18th annual

he 18th annual International Association of Lighting Designers (IALD) Lighting Design Awards presentation and dinner took place on May 31, 2001 at the Paris Hotel in Las Vegas. The judging for the awards, which is cosponsored by Architectural Lighting Magazine, was held March 1-2 at the IALD office in Chicago. From the 175 submissions received this year, one project was awarded the Award of Excellence, seven received Awards of Merit and one project was recognized with a Special Citation. Detailed coverage of these projects begins on page 24.

This year, in addition to the award winners, judges chose to recognize 14 projects that demonstrated an innovative lighting design solution for a particular portion or aspect of the project by naming them to a Compendium of Good Practice. Each of the following exemplifies good work and quality lighting that all designers strive to achieve: Bergdorf Goodman Plaza Level, New York, NY—lighting design by Cooley Monato Studio; Burj Al Arab Hotel (Exterior), Dubai, United Arab Emirates—lighting design by Jonathan Speirs and Associates; Burj Al Arab Hotel (Interior), Dubai, United Arab Emirates-lighting design by Maurice Brill Lighting Design Ltd.; Compal Electronic, Taipei, Taiwanlighting design by chroma33 Architectural Lighting Design; Hoboken Waiting Room, Hoboken, NJ-lighting design by Thompson + Sears, LLC; Irving S. Gilmore Music Library at Yale University, New Haven, CT-lighting design by Ripman Lighting Consultants; Montagne de Bueren Street Urban Renovation and Public Lighting, Liège, Belgiumlighting design by S.A. Daniel Dethier and Associates; Audrey Jones Beck Building, Museum of Fine Arts, Houston, TX-lighting design by Fisher Marantz Stone, Inc.; Museum Georg Schäfer, Bavaria, Germany-lighting design by Licht Kunst Licht GmbH; Paddington Station, London, England-lighting design by Speirs and Major Ltd; The Seattle Space Needle, Seattle, WA-lighting design by Ross De Alessi Lighting Design; Trader Vic's, Fukuoka, Japan-lighting design by Architecture and Light; Tribeca Grand Hotel, New York, NY-lighting design by Focus Lighting Inc.; Vermont/Santa Monica Metro Rail Station, Los Angeles, CA-lighting design by Horton Lees Brogden Lighting Design.







Award of Excellence winner Charles G. Stone II, IALD, Fisher Marantz Stone and Christina Trauthwein, Editor-in-Chief, *Architectural Lighting* and co-chair, Awards Committee

awards



Left to right: Michael Meyer, Arizona State University; Christina Trauthwein; and Katherine C. Abernathy, IALD, Available Light



IALD Chairman JoAnne Lindsley, FIALD, Lindsley Consultants (left) and Lesley Wheel, FIALD



Merit winner Angela McDonald, IALD, Horton Lees Brogden Lighting Design (left) and Ann Kale





Stephanie Salle and M.J. Paul of Prescolite

Left to right: Christina Trauthwein; Merit winner Jonathan Speirs, IALD, Speirs and Major; and Ann Kale

Congratulations...

The IALD Education Trust Fund has awarded four aspiring architectural lighting design students from around the world a total of \$19,000 in scholarships and cash awards. In addition to receiving a \$2,500 scholarship, for the first time, all four winners were awarded an all-expense paid trip to Lightfair International.

This year's IALD Education Trust Fund scholarship winners are:

Kanlaya Leehanantakul, originally from Bangkok, Thailand, is currently pursuing a master's degree in lighting design from Parsons

School of Design in New York City. Nandini Mukherjee earned her Bachelor of

Architecture degree in Jamshedpur, India. She is also completing her master's degree in lighting design at Parsons School of Design.

Sui Fang is a graduate student at the University of Southern California. She received a bachelor's degree in architecture from Tianjin University in the People's Republic of China.

Recipient of an award cosponsored by Architectural Lighting, Matthew Meier is currently an undergraduate student at the University of Kansas in Lawrence, KS. He is studying architectural engineering with an emphasis on illumination.





Above, left to right: Scholarship winner Nandini Mukherjee; Justin T. Brown of Lam Partners; scholarship winner Kanlaya Leehanantakul; and scholarship winner Sui Fang

Left: Suzanne Tron Haber, publisher of Architectural Lighting and Architecture, presents Matthew Meier of the University of Kansas with a \$2,500 scholarship.

American Museum of Natural History Rose Center for Earth and Space

wards

award of

New York, New York, USA

While its architecture recalls Wallace K. Harrison's 1939 Perisphere and 18th-century architect Etienne Louis Boullee's Cenotapha monument for Sir Isaac Newton-the American Museum of Natural History's Rose Center for Earth and Space speaks to the future with its interactive exhibitry, state-of-the-art projectors and massive databases. At night, lighted by Fisher Marantz Stone in a design hailed by IALD judges as "flawless," the Center glows blue and ethereal among the darkened trees, its speech devoted solely to the stars and distant galaxies that it reveres.



ce award of excellence awa





Located in New York City, this modern monument to the cosmos features a 36,000-sq.-ft. glass curtain wall that encloses an 87-ft.-diameter sphere. Lighted from above and below by blue fluorescent floodlights, the sphere appears to float, magically suspended in a blue ether. The floodlights are lamped with T12 fluorescent sources for easy maintenance, louvered to minimize brightness and circuited in sequence to create a rolling fade and produce the effect of a slowly turning sphere. To contrast with the soft blue glow, 5-degree ellipsoidal spotlights recessed in a ceiling slot highlight from above the planets suspended around the sphere. From below, the planet exhibits are uplighted by shielded AR111 narrow-beam spotlights located with the fluorescent floodlights on the lower edge of a balcony.

Spiraling around the underside of the sphere, a 360-ft. ramp forming the Harriet and Robert Heibrunn Cosmic Pathway is delineated by runs of blue and red cold cathode tucked under the curving walls. The exhibit and interactive panels recount the 13-billion-year history of the cosmos and relate one's progress down the pathway to the passage of time. The tiny display niches and backlighted graphics are lighted by a combination of fluorescent lamps for the graphics and fiber optics for the niches. The illuminators are concealed on the underside of the ramp.

Low-voltage and line-voltage PAR38 and AR111 track fixtures are used to illuminate exhibit walls throughout the Center, while recessed downlights guide visitors through corridors and passageways. For the Hall of the Universe, situated underneath the sphere, the tracklighting is inte-

grated into ramp soffits in the Cosmic Pathway and around the mezzanine levels.

Other lighting details enhance the architecture of interior spaces while reinforcing general themes. Immediately inside the glass doors on 81st Street, circular cutouts, luminous with blue and white cold cathode lighting, echo the sphere and suspended planets. The circular theme continues in the group assembly room where more cutouts are etched in a fluorescent glow. The edge of the room's ceiling is accentuated by covelighting. Outside, a fountain and plaza nod to the sky above with the constellation Orion re-created with end-emitting fiber. Step and walkway fixtures are aligned to emphasize the formal orientation of the plaza.

In addition to highlighting the museum's bold geometric forms, the solution also includes an events lighting infrastructure, which provides power for distributed dimming packs and a DMX data ring, and allows for temporary lighting without cables on the floor.

According to IALD judges, the dramatic lighting of this homage to space "takes an idea and makes it a success with the solution—aesthetically, it's a 10."

detail

project American Museum of Natural History Rose Center for Earth and Space location New York, NY, USA owner American Museum of Natural History lighting designer Fisher Marantz Stone—Charles G. Stone II, IALD, Henry Forrest, Alicia Kapheim, Matthew Toomajian architect Polshek Partnership Architects engineer Altieri Sebor Weber renderings Fisher Marantz Stone, Inc.—Javier Ten photographer American Museum of Natural History—D. Finnin; Jeff Goldberg/Esto lighting manufacturers LSI; Forum Lighting; ETC; Edison Price; Elliptipar; Rosco; Lutron

Alexander Graham Bell House British Telecom Regional Headquarters

Edinburgh, Scotland, UK



Nards

Striking in color and dramatically lighted, Alexander Graham Bell House, British Telecom Regional Headquarters is an unmistakable presence in the night sky of Edinburgh, Scotland. Charged with creating a luminous landmark within a major business park, lighting designers Jonathan Speirs and Associates devised an exterior and interior lighting plan that not only fashions a public identity for the company, but also responds to budget constraints and restrictions on integrating the lighting with architecture.

A cylindrical meeting and restaurant facility at the northeast corner anchors the rectangular office block and serves as a signature for the building and the business park. As its glazed facade seemingly dematerializes at dusk, an inner red cube emerges, evenly illuminated with 150W metal halide floodlights mounted on the drum structure. Track fixtures lamped with AR111 sources and located in restaurant soffits enhance the warmth of the red walls. A series of 70W CDM-R narrowbeam projectors bracketed off the base of the exterior metallic drum and fitted with sculpture lenses produces a controlled blade of cool light that contrasts with the vibrant red.

Eaves protruding through the roof of the main body of the building are uplighted with the cool light of 58W T8 fixtures chosen to complement the lighted offices below. On the west facade where staircases streak across a view into the interiors, compact fluorescent downlights wash the painted blue walls, adding cool to cool and creating visual interest when seen from the parking lot.

Inside, custom "raft" fixtures, designed with the architects, are suspended within each of the concrete ceiling coffers to light office interiors as well as to accommodate other building functions. The fixtures contain dimmable fluorescents with PIR control, allowing extensive energy management capability, and are coupled with louvered downlighting to illuminate the open plan offices and provide glare-free task lighting.

Metal halide downlights and recessed uplights join forces to supplement the low levels of daylight in the atrium and create the appearance of abundant sunlight. Light punching through the foliage of trees in the space contributes texture, while promoting plant health. At night, the atrium is further dramatized by gobo patterns.



project Alexander Graham Bell House, British Telecom Regional Headquarters location Edinburgh, Scotland, UK owner British Telecom lighting designer Jonathan Speirs and Associates Ltd.—Jonathan Speirs, IALD, Gavin Fraser architect Bennetts and Associates engineer Roberts & Partners research Jonathan Speirs and Associates, Ltd. photographer Peter Cook; Keith Hunter lighting manufacturers Thorn; Borens; Guzzini; Prolight; Outdoor Lighting; Z-Line; Eness; Meyer; Erco Lighting; Zumtobel Staff; ETC; Crescent; Castaldi; Fitzgerald



vard of merit award of merit



Suspended over a harbor in Duisburg, Germany, the Fußgängerbrücke (Pedestrian Bridge) was designed by engineers Schlaich Bergermann und Partners GbR not only to facilitate pedestrian passage across the water, but also to respond to oncoming boat and ship traffic. Constructed of 15 jointed segments and hydraulic poles hitched to a pair of suspension cables, the bridge is mobile, arching for ships that pass through the harbor. At night, when seen from a distance, the bridge, illuminated by lighting designers Uwe Belzner and Stefan Hofmann, resembles an elastic chain of beaded light, flexing and then straightening against the darkened sky.

In a solution described by IALD judges as "obvious, but very different—and brilliantly simple," the luminous span is formed solely of white LEDs queued in groups of 16 and welded onto a platine. The glowing assembly is mounted behind satin glass in a 40-x-20-mm profile. Belzner and Hofmann's design integrates the lines of LEDs with the railing of the bridge by positioning them on the inner side of 128 posts. The LEDs alone fulfill the requested power amount of 200W and provide sufficient and even illumination of the walkway.

In complementing the bridge's architecture and function, the lighting of Fußgängerbrücke, as cited by judges, "excels aesthetically and is functional and efficient," while adding a touch of elegance to the Duisburg night.

detail.

project Fußgängerbrücke (Pedestrian Bridge) location Innenhafen Duisburg, Nordrhein Westfalen, Germany owner City of Duisburg lighting designer Architektur Licht Bühne—Uwe Belzner and Stefan Hofmann architect/engineer Schlaich Bergermann und Partners GbR, Structural Consulting Engineers additional credit Innenhafen Duisberg Entwicklungsgesellschaft mbH photographer Hans Georg Esch lighting manufacturer Ansorg Lichttechnik GmbH



P



award of merit a

Herz Jesu Kirche (Heart of Jesus Church) Munich, Germany



Tungsten halogen sources are used throughout the church to render its rich materials and architectural surfaces—a priority for the lighting design team. The solution relies on only two lamp types—low- and line-voltage PAR56s—to light the main worship space and discreetly conceals all fixtures in the 14-ft.-high ceiling for reduced glare and minimal fixture intrusion.

The electric light balances the natural light that enters the space via angled louvers, which track the movement of the sun. The daylight is directed toward the altar—which is further accented by low-voltage PAR56 adjustable fixtures—and a full-length, metal mesh cross that changes in appearance throughout the day. Sexton's design supplements the natural light with PAR56 wall washers, evenly spaced and recessed above, which vertically illuminate the louvers and scrim cross. The result, praised by judges for its symbolic and emotional impact, is a stunning backdrop created by streaks of light shooting downward and behind the cross.

For the congregation, over-the-shoulder, horizontal illumination is supplied by PAR56 adjustable fixtures also concealed in the ceiling, while additional low-voltage accent lights highlight a baptismal font used in christening ceremonies. Low-voltage steplights delineate a circulation route from the entrance to the choir box and were chosen for their color consistency and size. To accommodate the various functions of the church, the different layers of light are controlled by a 20-zone preset dimming system for maximum flexibility. At night, when the blue doors of Munich, Germany's Herz Jesu Kirche (Heart of Jesus Church) open, a wood facade bathed in warm light and the sight of a luminous altar in the background beckon to passersby with the promise of spiritual comfort. Illuminated by George Sexton Associates to enhance the graceful structure and meet its functional requirements, the lanternlike church serves as a spiritual focal point for its community both in practice and expression. IALD judges cited the lighting design for its "successful recreation of an environment truly conducive to meditation and religious practice."





project Herz Jesu Kirche location Munich, Germany lighting designer George Sexton Associates owner Katholische Pfarrkirchenstiftung Herz Jesu architect Allmann Sattler Wappner Architekten landscape designer Realgrün engineers Ingenieursgesellschaft mbH Hagl (structural); Ingenieurbüro für Fassadentechnik R+R Fuchs (facade); HL Technik AG (service); Ing. Gemeinschaft Beneke, Daberto+Partner (acoustic) art Alexander Beleschenko (glass entrance portal); Lutzenberger & Lutzenberger (portal behind altar); M+M (five wounds); Matthias Wähner (stations of the cross) photographer Florian Holzherr lighting manufacturer Erco Lighting

vard of merit award of merit

Millennium Dome London, England, UK





For overcoming the politics alone, one IALD judge mused, the lighting designers of the Millennium Dome merited special recognition. However, the solution designed by Speirs and Major for both the exterior and interior of the Dome was "certainly up to the challenge" of this gargantuan project, which according to the judges, "required enormous skill: It's dramatic—the lighting makes the project."

The image of the Dome that remains with the world is perhaps that of its subtly glowing roof and the luminous masts that project through its surface into the night sky. Projectors lamped with 250W metal halide sources and concealed at the base internally illuminate the 100-m-tall structures, while, to echo the red navigation lights at the top of the masts, concrete anchor blocks and cable stays are highlighted with a red beacon. Red plant cylinders, lighted with tungsten halogen floods and dichroic glass filters, punctuate the Dome's rim and are equipped with sequential dimming facility. Plants inside the cylinders are cross-lighted to produce strong textural effects, while direct burials lamped with 70W CDM-T sources uplight the perimeter canopy.

Inside the Dome, Speirs and Major's design provides an effective backdrop to the exhibits illuminated by others, while addressing problems of light pollution onto the roof and visual organization of spaces. Lending a sense of consistency to the canopies that extend from the interior to the exterior, floodlights with 70W CDM-TD lamps and diffusing lenses uplight the ceiling and supply ambient lighting to circulation spaces. A mix of blue and white light illuminates the ticket booths and changes in intensity to signal the open and close of operation, while a similar combination of colors also lights the perimeter of the fabric dome. The fabric serves as a background to the exhibits and is illuminated by 1kW metal halide projectors concealed on the roofs of the hospitality suites and 400W metal halide uplights bracketed off the perimeter structure. Together, they enable the creation of four basic scenes.

The lighting solution also undertook the illumination of several special attractions, including the Living Wall, a landscape design lighted with a combination of cool compact fluorescent and tungsten halogen lamps and partially studded with LED point sources. LEDs are also used to delineate the Greenwich Meridian, where the lamps are lined up and recessed in a black granite frame. A bridge connecting the river bus pontoon to the main site, the canting brow features a structure washed in a deep blue and a canopy uplighted with a custom RB color-change fixture to provide a range of softly changing color washes.



project Millennium Dome location Greenwich, London, England, UK owner New Millennium Experience Company, Ltd. lighting designer Speirs and Major Ltd.—Jonathan Speirs, IALD, Mark Major, IALD, Laura Jones, Claudia Clements, Andrew Jacques, Philip Rose, Colin Ball, Henrietta Lynch, Greg Lomas show lighting designer Patrick Woodroffe architect Richard Rogers Partnership electrical engineer Buro Happold photographer Mandy Reynolds lighting manufacturers Ambience: Whitecroft; Hoffmeister; Encapsulite; Concord; Philips; ETC; Oldham; Zumtobel Staff; Thomas; Erco Lighting: Evolution; LEC Lyon; Louis Poulsen; Staff; Marlin; Meyer; Sill; Thorn; WE-EF; Woodhouse; IGuzzini

Module VII Chiller Plant University of Pennsylvania

Philadelphia, Pennsylvania, USA

Giving new meaning to the idea of a "cool" lighting design is U. Penn's new Chiller Plant. Cited by judges as a "striking example of unified lighting" that employs design solutions which are neither unique nor difficult, but produce an "aesthetic effect that is phenomenal," the lighting concept for this project truly enhances the architecture and ornaments it with an illuminated crown-like array of cantilever arms to create a lightly articulated cornice. It is really the lighting that transforms this purely utilitarian facility—and typically mundane building type—into a striking campus landmark without losing the expression of its functional and mechanical character.



details

project University of Pennsylvania Module VII Chiller Plant location Philadelphia, PA, USA owner University of Pennsylvania lighting designer Lam Partners, Inc.— Robert J. Osten Jr., James Hamilton, Justin T. Brown architect Leers Weinzapfel Associates—Jane Weinzapfel,Andrea Leers, Joe Raia, Catherine Lassen mechanical/electrical engineer William J. Trefz Consulting Engineers Inc.— William Trefz construction manager Sordoni Skanska USA—Robert Mullen, Marie Mohr electrical subcontractors Silicon Power Controls; Shelly Electric photographer Peter Aaron/Esto; Lam Partners, Inc.; Leers Weinzapfel Associates lighting manufacturers Elliptipar; Sterner; High End Systems The Chiller Plant provides a unique gateway to the university's campus. More a giant machine than an occupied building, it posed an interesting opportunity—and definite challenge—for lighting design firm Lam Partners, Inc. Due to the plant's infrequent occupancy, the primary lighting objective was to provide visual interest



for passersby—which, according to one of the judges who is familiar with the project, it successfully accomplishes—and to mask the building without making it appear massive. The equipment's lively OSHA coloration is visible outside with light levels controlled and fixtures painstakingly aimed to eliminate glare from inside and out.

By illuminating the structure's featureless skin—a 60-ft.high scrim of perforated aluminum—the building takes on a mysterious glowing quality. Delicate but huge, the wall's exte-

mysterious growing quarty. Dencate but huge, the wart sexterior is lighted by a floating necklace of metal halide fixtures, balanced by interior floodlighting of the colorful machinery for an ambiguous transparency. Extensive computer modeling and partial full-scale mockups fine-tuned the fixture spacing and optics to prevent scalloping and ensure correct brightness balance for the desired scrim-like quality. The finished building very closely matches the computer renderings. The massive cooling towers remain unlighted to avoid appearing top-heavy, and the cylindrical cowls are lighted asymmetrically to accentuate their curvature.

The exterior fixtures used to create the illuminated "necklace" are integrated unobtrusively with the structural columns. This extension from the wall provides easy lift-truck access from a track around the perimeter for relamping. The ballasts are remotely located near ground level to further simplify maintenance.

Inside, economical metal halide floodlights are used both for ambient worklights, which can be turned off when the building is unoccupied, and for accenting the machinery, which contributes to the scrim effect.

vard of merit award of merit

Raleigh/Durham Airport Parking Structure

Raleigh/Durham, North Carolina, USA

Serving as beacons for late-night visitors to the Raleigh/Durham Airport, twin cones of Teflon fabric mark the ends of the airport parking structure and make the search for a space just a little easier. As designed by Cline Bettridge Bernstein Lighting Design, the illumination of the multi-tiered garage responds to the challenges presented by the architectural forms, opacity of materials used and maintenance requirements. A palette of contrasting colors was also applied to dramatize the building's composition and lend it visual impact.

The 60-ft.-high Teflon fabric

cones signal the entrances to the parking structure. Opaque by day, the fabric is suspended within a helix-shaped vehicular ramp that snakes around the cones. To light the cones without producing fixture shadows, the solution attaches 750W metal halide fixtures in three different light distributions to a central pole that is equipped with an accessible ladder for easy maintenance.

After parking, passengers access the terminals via a central atrium topped with a canopy of stretched Teflon. By day, the stretched fabric screens out 80 percent of the daylight, while at night, it reflects the cool light of metal halide uplights mounted on the spandrels and outer edge of the canopy. Metal halides are also used to floodlight the exterior of the structure and accent





planters below. Providing striking contrast, decorative pendants lamped with warm compact fluorescents light perimeter passages and add sparkle to the transparent stairwells. The

juxtaposition of different colors and lighting effects assists passengers in finding their way and helps define the garage's architectural composition. From the atrium to the terminals, passengers transition through a tunnel in which cool light sources tucked in a glass-faced cove highlight a funnel-shaped ceiling and illuminate the passageway.

The masterful transformation through light of a structure often regarded as unremarkable prompted one IALD judge to comment, "I would certainly look forward to parking there!"





project Raleigh/Durham Airport Parking Structure location Raleigh/Durham, NC, USA owner Raleigh/Durham, NC lighting designer Cline Bettridge Bernstein Lighting Design—Francesca Bettridge, IALD. Daniel Rogers architect The Freelon Group, Inc.—Chris Brasier, Art Lin engineer Walker Parking Consultants— Steve Totten photographer James West lighting manufacturers Sterner; Elliptipar; Kim Lighting; Gardco Lighting; Bega; Louis Poulsen

San Francisco City Hall San Francisco, California, USA

For this 1915 landmark, lighting designer Angela McDonald designed state-of-the-art lighting systems for public and tenant interiors, as well as exterior facade lighting, which according to the judges, "immediately evokes an emotional response, as it is beautiful in its simplicity, allowing the Beaux-Art architectural design to shine." In total, more than 700 historic fixtures were restored and refurbished despite minimal documentation of existing type, quantity or condition. New systems make use of energy-efficient technologies—optimizing optical performance, lamp life and maintenance.

wards

The historic building includes two office wings linked functionally and symbolically by a 300-ft. dome, which is clearly the focal point of the building. Sensitive to Beaux-Art proportions and hierarchies, the lighting designer chose to uplight the Doric colonnade. At the entry, in-grade metal halide PAR fixtures illuminate carotids supporting the balcony. The pediment is illuminated using metal halide framing projectors.

Throughout the exterior design, fixtures are mounted in concealed locations; using controlled and shielded sources minimizes glare and spill light. The colonnades are silhouetted by 3000K, 100W metal halide PAR38s, reinforcing the rhythm and mass of the structure. The fixtures are accessible from locations on balconies. McDonald applied this same technique at the upper colonnade, which helps to emphasize repeated proportions. Floodlights (3400K) illuminate the dome and PAR lamps mounted around the lantern highlight the gold leaf. Grazing angles accentuate the texture and detail of the ornamental stonework. Two color temperatures were intentionally selected



project San Francisco City Hall location San Francisco, CA, USA owner City & County of San Francisco lighting designer Horton Lees Brogden Lighting Design—Angela McDonald, IALD architect San Francisco Bureau of Architecture; Heller•Manus Architects; Finger & Moy Architects; Komorous Towey Architects; MBT Architects historic architect Carey & Co. electrical engineer FW Associates electrical contractor Rosendin Electric photographer Jay M. Graham, ASMP; Robert L. Canfield lighting manufacturers Linear Lighting; Zumtobel Staff; Peerless; Rejuvenation Lamp; Taylor Stokes; Litelab; Elliptipar; Kurt Versen; Alkco; Hydrel; Phoenix Lighting; Scott Architectural Lighting; Strand; Lutron



to differentiate the limestone facades and the dome.

Mockups ensured compatibility with adjacent buildings. Metal halide allowed the replacement of 300W-500W incandescent lamps with 100W—a 70 percent reduction—and lamp life improved from 750 hours to 10,000 hours. Using metal halide PARs with consistent CRI and color temperature for all fixtures, except floodlights, also minimizes maintenance. All elements were evaluated for effectiveness to the overall concept during several budget reductions. The creative, economical and innovative use of minimal lamp and fixture types has made this design the cornerstone for continued facade lighting in the Civic Center.

The lighting for the interiors also required sensitivity to spatial hierarchy and characteristics of Beaux-Art architecture. Architectural lighting

was added to enhance the sequence of formal spaces and accentuate the rotunda's architectural volume and complexity. Historic fixtures, accents for feature plasterwork, uplights that silhouette the colonnade and the lighting for the dome can all be dimmed, optimizing flexibility, lamp life and energy use. In the rotunda space, uplighting from concealed positions is focused in overlapping patterns for temporary installation of color without refocusing. Positions were evaluated to utilize existing access for maintenance, avoid impact to historic materials and minimize glare.

Historic photos were the basis for pendants recreated for public spaces and offices. Energy-efficient fluorescent lamps produce appropriate illumination for offices. This design recalls original fixtures while improving illumination and maintainability. Comparative specifications of standardized lamps and equipment resulted in a creative, effective design within budget.

citation citation citation

... for a unique solution to exterior sign lighting

The New 42nd Street Studio Building—Facade Lighting New York, New York, USA

The fabrication of a "billboard" of light for New York City's New 42nd Street Studio Building required not only a mastery of the luminous, but also an ingenious interpretation of city guidelines for signage on new buildings. Constructed of glass and steel, the building's facade is exuberantly lighted by Anne Militello of Vortex Lighting to mirror the artistic endeavors undertaken by the Studio and its occupants.

The nightly displays of kinetic lighting effects are varied via an astronomical timeclock and produced by a total of 310 fixtures concealed within the architecture. Providing a solid layer of blue light, fluorescent wall washers, equipped with theatrical gels and placed on relays, are located inside the building's floor-to-ceiling windows to uplight a translucent scrim covering the windows on each floor. The blue serves as a foundation for the addi-

tion of secondary colors in a variety of patterns produced by fixtures mounted on catwalks and fitted with dichroic glass. Located on each floor, the catwalks are secured to an armature extending 3 ft. from the main curtain wall. Mounted on top of the marquee, five intelligent HID fixtures contribute dimension to the front of the steel louvers and a foreground layer of light. Extending the height of the building, hollow acrylic tubes lined with optical film and lighted with programmable HID light sources fuse into a glowing vertical line capable of shifting through a range of solid and variegated colors.

During the programming of the controller, wireless headsets facilitated communication from the ground level to a location above and across the street from the facade. Radio technology was then used to access the central computer inside the Studio. To reflect the personality of the city, Militello asked people on the street for favorite patterns, which were incorporated in the designs and then choreographed to street sounds.







project The New 42nd Street Studio Building—Facade Lighting location New York, New York, USA owner The New 42nd Street, Inc. lighting designer Vortex Lighting— Anne Militello, IALD architect Platt Byard Dovell Architects—Charles Platt, Ray Dovell engineer Goldman Copeland Associates; Production Arts Lighting; Platt Byard Dovell Architects research Vortex Lighting; Production Arts Lighting; Platt Byard Dovell Architects other contributors Production Arts Lighting— Steve Terry, Ed Condit, Mike Lay, Bill Groener; New 42nd Street, Inc.—Chris Buckey, Ryan O'Gara, Christie Havard, Cora Cahan photographer Stephanie Berger; Andrew French; Elliott Kaufman lighting manufacturers Altman; Sterner; Elliptipar; TIR Systems; ETC; High End Systems; Rosco; Special F/X

LIGHTFAIR REPORT 2001

BY DAVID HOUGHTON, PE, CONTRIBUTING EDITOR

Blackouts may be dimming the Golden State, but the lights are still on full blast in Las Vegas, site of Lightfair International 2001. With the recent headlines about electricity shortages, energy efficiency had a higher-than-usual profile at this year's show (the venue notwithstanding!).

LAMPS AND BALLASTS

LIGHTFAIR

News from Philips Lighting includes a high-output version of the jumbo, single-ended CFL, called the PL-L. With 6000 lumens pumped out of a 22¹/₂-in. double tube, this 80W lamp is more akin to the new T5s than its F39 brethren. Another high-output option is Philips' circular 12in. T5 with an output of 4400 lumens. Hotel energy managers take note: the Halogená halogen screw-base lamps are now available in decorative shapes such as flames, which should help the energy efficiency of chandeliers.

It's tough being a sodium light these days. Philips showed another way to get rid of the yellow kid on the block: the MasterColor RetroWhite lamp, which is a metal halide lamp that is a screw-in replacement for HPS lamps. The lamp is open-fixture rated, has a 20,000-hour lifetime and produces 90 lumens per watt on the HPS ballast.

Ceramic arc tubes are continuing their march into higherwattage metal halide lamps, with 250W and 400W lamps being shown by Philips for July 2001 shipment. CMH technology offers more stable color, better lumen maintenance and longer lifetime than conventional quartz-glass are tubes.

Osram Sylvania's technology rollout this year included a new type of metal halide arc tube: a two-piece "bulgy" fused ceramic arc tube that extends life to 12.000 hours compared to 9-10kh for straight ceramic tubes. The new "Xtreme" T8 lamp is one of a new breed of super fluorescent systems. Mostly through enhanced phosphors, the lamp is rated for 30,000 hours and 95-percent lumen maintenance when combined with its matched program-start electronic ballast. System efficacy for a two-lamp system is 94 lumens per watt maintained—similar to T5 performance.

> The most striking new lamp technology this year had to be the Osram Sylvania Planon lamp, which is a planar fluorescent driven by rows of interlaced electrode fingers. The electrodes prod xenon gas into generating UV photons, which in turn generate visible light

MasterColor RetroWhite metal halide lamp from Philips Lighting is a screw-in replacement for HPS lamps. **Circle No. 55**



Digital Adressable Lighting Interface (DALI) products are now available from The Watt Stopper, Leviton, Osram Sylvania, Philips, MagneTek and others. **Circle No. 56**

via a phosphor coating on the lamp's flat plate. The panel is 10 mm thin, lifetime is rated at 100,000 hours and no mercury is involved. The initial target market is backlit LCD displays (which currently use conventional fluorescents) but this quasi-solid-state light source could evolve into general lighting applications or create glowing walls.

GE Lighting has also been at work fine-tuning fluorescent systems. Its T8 Watt-Miser system uses upgraded fill gases and phosphors to deliver the same light (2850 lumens) as conventional T8s but with 6 percent less input electricity. GE also showed super-high-output CFLs (57W and 70W) for OEMs to use in fixtures such as the high-bay bowls made by Intrepid. The new GE electronic MR16 is another attempt to provide low-voltage beam power in a line-voltage screwin lamp (recall the "Designer 16" from about a decade ago).

A field note on using dimmable compact fluorescents: New Hampshire lighting specifier Victor Reno has experienced short lifetimes (i.e. hundreds of hours rather than thousands) with these lamps when they are not burned in at full power for a day or so. Osram Sylvania fluorescent specialist Susan Anderson agrees that it is a good idea to turn up dimming CFLs to vaporize and disperse the mercury in the lamp.

In last year's report, we discussed two emerging methods for digitally addressing and controlling lighting equipment: the AddressPro system created by ballast manufacturer Energy Savings Inc. and the Digital Addressable Lighting Interface (DALI) already in use in Europe. At this year's show, it appeared that DALI is pulling into the lead, with quite a few new products—mostly ballasts supporting this communications protocol. Tridonic, one of the main proponents of the system, noted that DALI products are now available from The Watt Stopper, Leviton, Osram Sylvania, Philips, MagneTek and others. We will cover the fascinating topic of digital lighting control in more detail in a future issue.

(Continued on page 36)
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(Continued from page 34)

FIXTURES

In the just plain "cool" category, Louis Poulsen showed their Artichoke pendant, which ingeniously hides a lamp under a cascade of metal panels that earn the lamp its name. I'd hate to be the one that has to clean it, however.

Columbia's new Brio 2-x-2 recessed direct downlight uses three T5/HO lamps and is only 2¹/₂-in. deep. Even with the high-brightness lamps, the fixture meets RP-1 standards for glare control.

Lightolier showed their new programmable track lighting system called Atom. This clever system uses power-line-carrier (PLC) communications to allow track head features such as scene programming, fading and cycling. Programming is done with a handheld laser/IR device, similar to the AddressPro system. Atom fixtures can talk between any vendor's tracks on a common circuit, and a "Firewall" module allows communication

between circuits. Occupancy sensor modules are also available. Ledalite's Meso-X1 suspended linear pendant, which incorporates the best-of-show MesoOptics technology, uses a single T5/HO lamp that projects through holographic louvers to deliver impressive numbers: 60-percent uplight, 40-percent downlight and 94.5percent fixture efficiency in an modern-looking fixture that is very comfortable to look at.

TIR Systems, purveyor of light pipe technology, has developed a niche-market product specifically for natatoriums (indoor swimming pools). The Illumawave 1000 uses 20-ft. light pipe modules connected to 1000W metal halide drivers.

Intrepid Lighting continues to develop innovative compact fluorescent high-bay fixtures that compete with HID fixtures. They now offer a fixture based on the 85W Philips QL induction lamp and another that uses the 150W Osram Sylvania Icetron lamp, both of which have very long life (60,000–100,000 hours).

SOLID-STATE LIGHTING

• LED fixtures with tiny white lights appeared in greater quantity than last year. Some of the most popular applications included

"walkover" pathway lights and step lights, where the long lifetime and ruggedness of the solid-state lamps can be put to good use. Vendors showing these luminaires included Lucifer, Louis Poulsen and Modular International.

• In private discussions, some specifiers expressed reluctance to use current-generation white LEDs for long-burn applications, citing lumen decline of the phosphor-based units. This issue is certainly getting the attention of LED manufacturers and OEMs. A LumiLeds press release dated May 29, 2001 claims a 25,000 useful life for their white units. Among other measures, the company is using silicone die caps instead of the conventional epoxy

resin; the latter tends to yellow with age. Lucifer estimates a 50,000-hour "useful life" (70-percent lumen maintenance) for the LumiLeds white units in their Stealth path light.

Last year, LumiLeds showed early models of their "power package" LEDs. Those units are now bundled into groups that make them ready for whatever application you can dream up. The "rail" system



• Ballast manufacturer Advance has been working on the hidden part of LED lighting: the transformer/driver packages that are required to hook up the tiny lights to line voltage. Like other LED technology shown this year, the effort is to develop components and packages that make it

Lightolier's Atom is a programmable track lighting system that uses powerline-carrier communications for scene program-

ming, fading and cycling. Circle No. 57

easier for OEMs and specifiers to actually use the new technology.

If LumiLeds LEDs had frequent flier accounts, they would qualify for first-class upgrades. The little guys start out at a wafer fab in San Jose, CA, go to Southeast Asia for slicing and electronic assembly, then on to the Netherlands for optical assembly. Installation in U.S. applications completes an around-the-world journey.

RANDOM NOTES

• The City of Berkeley, CA is embarking on an ambitious and fun demonstration project to show just how much energy can be saved by residential lighting retrofits: They are going to tackle a "treasure hunt" that covers an entire city block with help

from cosponsors Lawrence Berkeley National Laboratory (LBNL) and Philips Lighting. Pre- and post-monitoring will provide data that could help other California city blocks reduce power consumption.

• For the first time ever, LBNL showed a fixture at Lightfair. In an effort to offer an energy-efficient and effective alternative to the incandescent table lamp and torchière—fixtures that often end up in commercial office spaces simply because people like them—LBNL engineers have come up with the High-Performance Table Lamp, a device that uses a pair of dimmable GE 2D lamps and an innovative bowl-support reflector that allows the user to direct up, down or both ways.

> • Under the warehouse shelving in the Intrepid booth was a very interesting gentleman promoting the use of direct current (DC) electricity for lighting systems that integrate with battery backup and renewable supply sources. Bill Wilhelm's Nextek system uses a power module that accepts utility AC power, DC power from photovoltaic cells or DC power from batteries and feeds 48V DC power to electronic ballasts. The ballasts are quite small due to their lack of a rectifier. For those wanting to provide on-site generation and high reliability for lighting systems, Nextek is worth a look.

> • Lamp recycling—primarily for linear fluorescents—is alive and well. According

to Earth Protection Services Inc., the U.S. EPA's adoption of the Universal Waste ruling has clarified responsibilities in this area, and over the last five years, linear fluorescent recycling has increased from 12 to 30 percent. The cost to recycle is currently about ten cents per linear foot of lamp, down from a quarter a foot a few years ago.





LumiLeds' "power package" LEDs are now

bundled into groups for use in a variety of

applications. Circle No. 58 No. 190 Flux astimates a 50,000 to Earth Destantion Series

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S S A

LIGHTFAIR

LEAVING LAS VEGAS ...

Architectural Lighting asked selected attendees their thoughts about Lightfair what got them excited, what left them hoping for more. Here's what they had to say:

AL: What's the most innovative product you saw?

"I liked the 'Reflections' series by Dreamscape Lighting Mfg., which offers recessed linear vertical lighting for vanity mirrors. In the past, this was always a custom installation. Now it is a standard item. I understand that they will be coming out with a dimmable version as well."—*Randall Whitehead*, *Randall Whitehead International* **"Call me biased**, but the majority of the cool stuff appears to be coming from the European luminaire and lamp manufacturers—Erco, Poulsen, Martin, Osram, Tridonic, etc. We tend to see this stuff a little earlier than the U.S. because we have a different approvals procedure that allows self-testing of products by the manufacturers (CE approval): therefore, new products get to the specification market faster than in North America."—Jonathan Speirs, Lighting Architects Group



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"Ledalite's MesoOptics, Meso-Optics, MesoOptics."—Glenn Heinmiller, LC, Lam Partners, Inc.

"The Seamless Line Seamless Fluorescent by Nippo Electric Company, Ltd., Japan. This ULlisted fixture and lamp deliver the 'Wow' factor with end-to-end lamp configurations, eliminating the need to stagger the fixtures to achieve uniformity and to prevent the dreaded 'light gap' so common in non-staggered fluorescents. The company's website address is www.nippo-web.com. It will be interesting to see what comes of this from the major lamp companies because it is not the fixture that is unique but rather the lamp."-Shad Arnold, LC, A&H Lighting Design & Consultation

"The High End low-cost MR16 color changer will fill a market niche. It's bright, cute, programmable and available at a very low cost."—Stefan Graf, IALD, Illuminart

"I'd like to see the continued evolution of LEDs (both sources and luminaires) and electronic ballasts. It was great to see Osram Sylvania's new quartz G9 series. I thought much of what was perceived as 'innovative' was too contrived."— *Gary Steffy, LC, FIALD, Gary Steffy Lighting Design*

"There were many innovative products this year, though if any one was really the most progressive, it would be the MesoOptics system introduced by Ledalite. This company has always searched for

(Continued on page 40)

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(Continued from page 38)

ways to improve upon optical systems in its product line and this new concept in optics pushes the envelope. There may be some future opportunities with this style of optics in the marketplace as a way to push luminaire efficiencies as well as visual comfort to the extreme."—John Decker, IALD, Decker Studio LLC

AL: Most notable trend?

"There have been improvements in the area of landscape lighting—specifically, improved quality. More fixtures are now better made. There have been many improvements made to existing designs, such as the Precision 2 In-Grade by B-K Lighting, which has improved longevity and actually cuts production and end-user costs. Another trend is having more catalogues available on CD. We can make color prints for specbooks without having to send catalogues to the color photocopier. This ties into the websites with downloadable spec sheets."—*Whitehead*

"Any indication of new trends seemed to be lacking. Perhaps the influence of European fixture designs on U.S. product and availability of European product. Also LEDs were everywhere."—*Heinmiller* **"The 'current' issues in California** are creating a trend—increased awareness for energy-efficient systems. Designers hope that a trend toward quality lighting will be in step with energy so that people and productivity do not suffer from the rush to reduce electrical costs."—*Graf*

"T2s, T5s, CMHs and LEDs continue to be trends in source and luminaire development. Continued evolution of T8s to longer life and/or more efficacious versions helps address sustainability issues to some extent. GE's 20W ceramic metal halide lamp is very promising. We're in desperate need of lowwattage, long-life, efficient lamps for accenting and 'punchy' downlighting in many facility types. Again, the Osram Sylvania G9 series offers a great trend potential in 120V quality lighting, presumably without the encumbrance of a tempered lens or shroud. One 'trend' that I think will die quickly is the push of T5/HO. These systems can't meet lighting criteria in many typical applications and also meet power budget constraints. Ditto for high-wattage anythings-55W triple-tube compacts and the 80W large single-tube compacts. We still think too much like Americans of the golden era of 'limitless energy.'" -Steffy



"The most notable trend was the gap

of theatrical and architectural lighting disciplines being bridged more than ever before. Not only in luminaires, but in controls as well. Color Kinetics unveiled an enhancement to their iPlayer line that stores shows and calls them up through an architectural interface. This advancement is allowing designers to simplify the process of introducing theatrical solutions within an architectural arena with the added flexibility of simply changing shows that might be event- or season-related. 'Userfriendly' is a concept that theatrical control manufacturers embody in their products where there are architectural needs,"—Decker

AL: What seemed to be missing?

"Progressive, cutting-edge decorative fixtures. What happened to the custom manufacturers? How about getting Sirmos on board out of New York or getting Boyd back out of San Francisco. Some of what I saw were low-quality knock-offs of these two companies."—Whitehead

"Innovative products—more cuttingedge equipment."—Speirs

"Lithonia and Cooper! I can understand the smaller companies that cannot afford to exhibit but what does it say about their commitment to the design world when the big guys don't bother to come?"—Heinmiller

"Some vendors just don't get it—no presence is a disappointment. I don't have sufficient time to devote to field trips to plants and 'design centers' or to let the reps drop in whenever they've got what they think is 'new.' A small booth with key personnel would go a long way to reaffirm acquaintances and familiarity with product lines. So, the likes of Cooper, Lithonia and others were missed. However, the Ercos, Lightoliers, Bartcos and the Celestials will see more of our specifications."—Steffy

"The representation by some of the most cutting-edge manufacturers in the marketplace. There seemed to be a lot of manufacturers that are introducing new products this year but were not exhibiting. That was a disappointment because Lightfair is such a great opportunity for specifiers to put their hands on equipment and interface with product developers. It's this relationship that I believe allows for new technologies, enhanced product and a stronger marketplace."—Decker

AL: How about the most promising technology?

"LEDs, long sustained life MR 16s, T2 fluorescents. These are not brand new but will have a lot of applications."-Whitehead

"LED technology. A few years ago, its use was limited to electronic devices and exit signs but now we see them at traffic signals-and doing a better job, I might add-as well as screw-in retrofit kits. And now there is a steady move towards more theatrical/color mix uses, etc."-Arnold

"In spite of the new LED, fiber-optic and other fun technologies, I think the continued development of the good, oldfashioned electric lamps (incandescent, fluorescent and HID) offers the most exciting promise in the future. They are the foundation for 99 percent of all design solutions."-Graf

"Low-wattage, long-life, efficacious lamps and addressable ballasts are going to be the drivers of lighting through this next energy crisis. I vote for the 20W T4 ceramic metal halide. I suspect there will be lots of positive responses to the circular pendant light that has motion sensor control and a remote control for the occupant and offers uplight and downlight. But like all stuff that tries to be too much at once, this product looks contrived and ultimately has too many failure options."-Steffy

"I think it continues to be with lamp and ballast systems. There continues to be development of these products allowing for improved efficacy, performance, color and maintenance. With the energy issues that the nation is faced with, it's critical that manufacturers continue to respond responsibly."-Decker

AL: What do you hope to see developed for next year?

"How about a bookstore that sells all the lighting, architecture and landscape books like they have at ASID and AIA conferences? There's got to be a better way of showing off fluorescent lamps other than full-blast bare bulbs. The eye fatigue was instantaneous. Maybe backlighted, full-scale transparencies of the product along with shots of installed projects. Then non-illuminated samples could be available for a hands-on presentation.-Whitehead

"Better, fully integrated control systems that can smoothly-and with no hiccups-cross the boundaries between straight architectural projects and those with more 'entertainment' lighting design."-Speirs

"I hope to see more developments in the T5/HO and T2 product offerings and I would really like to see a strong industry-wide emphasis on architectural lighting with the use of LED technologies and how we can utilize it effectively in energy conservation measures while adhering to the aesthetic parameters of design work."-Arnold

"How about wireless power distribution? Is anyone working on that yet?"-Graf

"A manufacturer that finally gets task lighting right. That's where user control should be-in task lights. Too bad there's very little out there with appropriate optics, style and control. Some of the stuff this year was laughable ----1950s all over again."-Steffy

"I'd like to see advancements in fullrange dimming for compact fluorescent lamps (to 1 percent) and reliability with fullrange capability in metal halide dimming for PAR. T6 and ED lamps."-Decker



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NEW PRODUCT SHOWCASE

Architectural Lighting was proud to sponsor once again the New Product Showcase at this year's Lightfair International in Las Vegas, NV. The 2001 New Product Showcase received a record number of submissions, totalling143 entries. The entries, grouped into 10 major categories, were presented by Joseph M. Good III, IESNA; Janet Lennox Moyer, IALD; Gina T. Pacumbaba-Watson, IESNA; and Robert Shook, IALD, IESNA. Twenty-one products received the Best of Category Award for demonstrating exceptional benefits to lighting professionals.

LIGHTFAIR

From the 21, four finalists were chosen to receive Awards of Distinction—Energy Award, Technical Innovation Award, Design Excellence and the coveted Best New Product of the Year Award. This year, the Best New Product of the Year was awarded to MesoOptics from Ledalite Architectural Products.

Jurors for the New Product Showcase were Rosemarie Allaire, IALD; Denise Bruya-Fong, IALD; Dawn Hollingsworth, IESNA; Ronald D. Kurtz Jr., IALD, IESNA; and Russ Owens, IESNA.

Best New Product of the Year

Ledalite Architectural Products MesoOptics

MesoOptics is a new optical control technology utilizing holographic techniques to overcome the problem of chromatic dispersion. It features microstructures programmed to create specific beam patterns of soft, uniform white light for both indoor and outdoor lighting applications. MesoOptics flat-plane diffusers can collimate or constrain light to prevent high-angle glare on computer monitors in office lighting applications. In daylighting applications, MesoOptics can "bend" sunlight to create controlled, even illumination throughout the day. As reflectors, MesoOptics elements reflect light back toward the source, irrespective of the angle of incidence. Ledalite's direct/indirect Meso-XI is the first fixture to incorporate the technology. Circle No. 50



In addition to the winners of Awards of Distinction, 17 other products received Best of Category recognition, including:

- Incandescent Lamps—Capsylite G9, Osram Sylvania Fluorescent Lamps—Octron XPS 4-ft. T8 lamps,
- Osram Sylvania
- HID Lamps—MasterColor HPS Retro-White, Philips Lighting
- Specialty Lamps—Luxeon Power Light Sources, LumiLeds
- Downlights, Wall Washers & Accent Lights-Pro-Optic Firebox, Progress Lighting
- Track Lighting, Low-voltage Cable & Rail Systems-Jilly Spotlight, Erco Leuchten GmbH
- Troffers, Commercial Recessed & Surface-mounted Fixtures—Cubetto, Zaneen Lighting
- Suspended Direct & Indirect Pendants—Eins Pendant, Leola/Transnational Enterprises
- Decorative Sconces, Chandeliers, Ceiling, Table & Task Lamps—Link, Zaneen Lighting
- Site, Roadway & Garage Lighting—LCD Series, Teka Illumination
- Landscape & Fountain Lighting—Stealth Steplight, Lucifer Lighting
- Fiber-optic & Remote Source Lighting—Underground, Fiberstars
- Vandal-resistant & Industrial Specialty Lighting-Occu-Smart Stair Safe, LaMar Lighting
- Exit Signs & Emergency Lighting—Orientation Luminaires with High-Protection Mode, Erco Leuchten GmbH Controls—Handshake, High End Systems
- Research, Publications, Software & Tools—AG132 Version 1.4, Lighting Analysts
- Ballasts & Transformers—Power-Select Electronic Metal Halide Ballast, Reliable Ballast



Energy Award

Ledalite Architectural Products Ergolight-Discus

Ergought-Discus

The new, workspace-specific Ergolight-Discus utilizes two

Sylvania Circline lamps to produce balanced task and ambient lighting for office workers. Equipped with energy-saving features such as personal dimming control, on-board occupancy and daylight sensors and system-wide energy management capability, Ergolight saves up to 87 percent on lighting energy bills and yields over 60 percent on life-cycle cost savings, according to the company. Currently named Discus, the product is scheduled for release in the fourth quarter of 2001 under a different name. **Circle No. 51**

Technical Innovation Award

Minolta Corp. CL-200 Color Temp Meter

The Minolta CL-200 Light Source Chroma Measurement System can perform measurements of tristimulus colorimetrics, chromaticity,



color difference, correlated color temperature and illuminance of light sources. Expandable and modular in design, the system consists of the hand-held, battery-operated, CL-200 meter body and a standard, detachable CL-200 receptor head suitable for a range of lighting conditions. Measurement output is selectable for analog or digital form. A standard RS232C interface enables connection to a computer. Various accessories and data management software are available. **Circle No. 52**



Design Excellence Award

Architectural Area Lighting Oculus

Suited for wall-, ceiling-, pole- and floor-mounting configurations in interior and exterior settings, Oculus utilizes a parabolic reflector system and axial lamp orientation to provide beam control and reduce glare and is offered in metal halide, compact fluorescent and PAR lamp versions. A T6 ceramic lamp model is also available. Oculus is capable of 360-degree rotation and 105-degree tilt adjustment for aiming. The fixture's flush glass design eliminates water ponding and mineral stains on the glass from standing water. Housing is cast aluminum with stainless steel hardware. Various internal and external options are offered. **Circle No. 53**

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Circle No. 26 on reader service card or visit lightforum.com/marketplace

Eye on Design—Report from Euroluce

Euroluce, one of the largest international lighting shows in the world, was held April 4-9 in Milan, Italy. This 22nd biannual event showcased some of the most innovative designs in lighting products in years. Lighting designer James L. Crowell, IESNA, principal of Crowell Design, Inc. in Radnor, PA, visited Euroluce and with the assistance of Savina Profuma in Milan, Italy, prepared this overview on the trends and highlights of the show.

"Six percent of the world's energy is devoted to lighting and 65-70 percent of Italy's lighting products are exported. In Italy, we have been successful in developing new concepts, because for centuries our culture has supported the tradition of craftsmanship and design. In Italy, manufacturers use small vendor-craftsman to develop prototypes, allowing them to bring new designs to market cost effectively. Challenges ahead are focused on the user, in terms of mobility, flexibility, affordability, color and pleasure."—Amedeo Guidobono Cavalchini, Luceplan and Paolo Rizzatto, president of Luceplan



Sui by Artemide Design: Carlotta Bevilacqua Portable personal light; polycarbonate; metallic blue or metallic bronze; 18 LED sources www.artemide.com



STAR*LED by Luceplan Design: Paolo Rizzato Table light; multiple LEDs; chrome/polycarbonate; 8 white LEDs; 3 alkaline batteries www.luceplan.com

Trend— New Technology: LEDs; fiber optics; photovoltaic cells; exposed printed circuits

Trend—Controlling Light: Mobile shades; dichroic filters to change color; perfectly balanced designs that move with a touch; sensitive sensors for controlling light

Zoom by Serien Design: Floyd Paxton Hanging fixture with scissor expansion; steel cable with flexible steel with acrylic accented elements; 10W halogen sources www.serien.com





Mix System by Artemide Design: Zebulon Multi-lamp modular lighting system with power source; jacks and accessories for sound, video, IT systems, etc.; extruded aluminum, sheet steel; fluorescent, incandescent sources www.artemide.com





Trend—Shapes: Simple, pure geometric forms: the sphere, the oval, the cylinder and the reduction of elements to basic two-dimensional forms

AIS by Luci Alternative Design: Takado Sano Table lamp; exquisite Murano glass forms with colored silica glass surrounding lamp source; crystal Murano with chrome base; 29W PL or 60W incandescent sources email: murano2@muranodue.com



Tracia by Artemide Design: Italo Rota and Allessandro Pedretti Modular fluorescent direct/indirect; colored filters fit into side panels; T16 fluorescent lamps *www.artemide.com*



Tab W1 by Prandina Design: Mengotti Prandina Wall lamp; geometric square modular; chrome with white opal glass; incandescent or halogen sources ww.prandini.it

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PAGE CIRCLE NO.

Alkco	13	1
Apple Cookie & Chocolate Co		
Architectural Area Lighting		
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Bruck Lighting Systems		
C.W. Cole		
Con-Tech Lighting		
Davis/Muller Lighting		
ETC		
Егсо		
GE Lighting		
Gardeo Lighting		
Guth Lighting		15
Il America Inc		
Lam Lighting Systems		
LaMar Lighting		

Leola	
Leviton Mfg	2
Lighting Services Inc	
Litecontrol Corp21	
Lucifer Lighting Co	
Martin Professional47	
Minolta Corp47	
New Metal Crafts16	
Panasonic47	
Quality Lighting14	
SPI LightingCov. 2	
Schott-Fostec LLCCov. 3	
Super Vision International12	
Teka Illumination Inc	
Tridonic Inc4, 47	
Ushio America Inc	
The Vista Wall Group41	
Zumtobel Staff Lighting	

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Aromat Corp.

Introducing Aromat's Slim Lite NAiS DCP electronic metal halide ballasts for 20W, 39W and 70W 120V applications. Aromat now offers the NAiS DCP technology in a smaller, slim style that is ideal for



new track fixture designs. Slim Lite provides the same high-quality performance features as our standard-size ballast. Slim Lite ballasts can be remote-mounted and carry a five-year warranty.

Circle No. 27

C.W. Cole

An illuminated handrail, the LR5 answers the need for a rail that complies with the ADA size limit. The new extruded aluminum design uses the T5 lamp wit the ballast in the housing, post, remote.



Circle No. 28

ETC

Unison Light Manager 1.8 Software by ETC now features spreadsheet/import and export networking capabilities. Designed to simplify the setup and operation of Unison lighting controls, the program allows unsurpassed flexibility



with integrated room combine, macro sequencing and astronomical timeclock.

Erco

Jilly Spotlight, a new range of spotlights for Erco standard and low-voltage tracks, combines smooth surface design, high-quality light from tungsten halogen lamps and optimum visual comfort thanks to an integral anti-glare ring with cross baffle.



Circle No. 30

Erco

Erco orientation luminaires designed for wet and dry locations use the latest LED technology for

maintenance-free and economical lighting to highlight passageways or specific areas and emphasize architectural forms. Their stainlesssteel surface and safety glass make them a high-quality feature in any building.



Circle No. 31

GE Lighting

The Criterion Series is a total outdoor lighting solution offering the convenience and savings of interchangeable components, excellent optics and photometrics, as well as complete architectural styling for area, flood and wall lighting.



Circle No. 29

LaMar Lighting

Occu-Smart Stair Safe is a vandal-resistant, bi-level luminaire controlled by an ultrasonic motion sensor to address both safety and energy efficiency.



Circle No. 33

Minolta Corp.

Minolta's CL-200 is a hand-held, battery-operated meter

that measures illuminance, chromaticity, color difference and color temperature. Applications include color inspection of light sources and color adjustment of display devices. It includes RS-232 capability with optional PC software available. Winner of the Technical Innovation Award at the Lightfair 2001 New Product Showcase. For more information, phone (888) 473-2656, ext. 6077 or visit our website at www.minoltalightmeters.com.



Circle No. 36

Leola

The Leola <Eins> collection is an elegant T2 linear fluorescent pendant and table fixture. Both are made out of a filigree aluminum special profile, silver anodized. Spe-



cialties are the extensive spread of light with equal strength at all points, due to the custom made reflector, and the rise and fall mechanism of the pendant.

Panasonic

70 Percent Energy Savings! Panasonic's GEN-IV compact fluorescent lamps come in 14W and 23W—yet their light output is equivalent to 60W and 90W incandescents, so you'll save up to 70 percent on energy! GEN-IV fits any conventional screw-type socket. Incandescent color



quality (2800K) and a 10,000-hour operating life make GEN-IV an all-encompassing lighting solution. Learn more: www.panasonic.com/lighting or (866) 292-7292.

Circle No. 37

Circle No. 34

Martin Professional



A compact and powerful, short-throw, CMY color changer designed for outdoor use, the Exterior 200 is an economical alternative to the Exterior 600. Features include the CDM150-SA/T lamp, full CMY color mixing, full-range dimming and stand-alone or DMX control.

Circle No. 35

Tridonic

Tridonic PCA EXCEL one4all Digital Dimming Ballast. Tridonic PCA digital, addressable, dimming ballast (1-100 percent) for fluorescent lamps provides users the ability to control and monitor individual



lighting fixture operation. Ballast operates using standard momentary switch (switchDIM) or with digital (DSI and DALI) controls, giving the ability to report lamp and ballast status and set control parameters such as maximum power levels during load shed conditions.

Circle No. 38

Place Your Bets!

BY FRANK A. FLORENTINE, LC

sndpoint

was wandering through the aisles of Lightfair 2001 in Las Vegas trying to absorb the various products offered by manufacturers when I got to the umpteenth million aisle and an old thought came back me: "What are the odds of having a common light track that will accept any light track fixture?" I doubt any odds were posted on this happening even a Las Vegas odds maker wouldn't take this risk!

Okay. Since I'm from Washington and rarely function without acronyms, let's call this the Common Light Track Adaptor or CLTA Proposal. Perhaps some might call it the Florentine Poker Game or FPG. In any event, isn't it time to put this on the table again and work toward a CLTA? It's an adventurous goal for anyone, a risk for all manufacturers. But I like adventure and risk, so I posed the question to another colleague who years ago had opposed the idea of a common light track. Much to my surprise, this colleague—yes, another LC-accomplished lighting designer—had seen the light and now agrees with me. A common light track adaptor—CLTA—a good idea? Maybe a little ahead of its time, but still a good idea.

Underwriters Laboratories (UL) calls the part that adheres the light track fixture to the light track an "adaptor." UL-1574 track lighting systems calls out every part that one could possibly use in a track lighting system. The adaptor merely enables the electrons to pass from the line side to the load side. All light track manufacturers have adaptors, and while they may claim that theirs is better, all adaptors essentially do the same thing. So why don't we all brands X and Y are now owned by conglomerate Z, and given the odds that conglomerate Z wants all of its products to work together smoothly, why can't they talk and share? Every manufacturer spends millions on teaching sales forces to talk. Let's make it easier for that sales person to close the deal. Make a common light track adaptor!

The arguments for a CLTA hold up pretty well against the negative arguments. CLTA would mean uniformity in moving those electrons. This in and of itself provides enormous benefits for safety and the National Electrical Code (NEC). The electrical contractor and/or installer would have some assurance that the track and adaptor would not compromise the integrity of the wiring.

The hangar door—my reference is the National Air and Space Museum—would be wide open for the lighting designer and/or consumer. Using one type of track fixture for this year's theme and another type for next year's theme without expensive re-wiring would increase the end user's palette of choices by millions. It would put more emphasis on the Lighting Certified professional making design decisions, which the International Association of Lighting Designers (IALD) strongly supports.

The hangar door would also be open for manufacturers. Their sales force could compete where it counts: at the track head. Genuine comparisons—and indeed, sales—could be based on quality of workmanship, light distribution and style. A CLTA would require a couple of things: assured polarity between the track and

Is a common light track adaptor a good idea?

get together and talk? Sure, it's a long shot. Odds makers would put it at a million to one for happening, but give me the odds, place your bets and let's see how the dice role.

Comparatively, the light track adaptor is the last holdout in the lighting industry for standardization among manufacturers. It is ridiculous. Suppose, for example, that one lamp manufacturer had designed a different medium screw-base model from the other lamp manufacturers. Where would we be? Odds are about two to one that we would be in the dark! Thank God—or Edison (are they the same?), NEMA or whomever is responsible—that a medium screw-base lamp is the same for any manufacturer. Manufacturers realized early in the lighting business that it is not a question of which socket the lamp fits, but of using *their* lamp in anyone's socket, given the correct voltage.

The arguments against a CLTA stack up very poorly against those in favor. Some want to blame UL for the current situation. UL says, "Give us the track, give us the adaptor, and we'll test to see if they work together," but it doesn't care who manufactures which part. Its concern is whether the parts can work together safely.

Others blame patents for the incompatibility. And they are correct in saying that they could not take brand X's part and put it on brand Y's fixture. Well, of course not. Brands X and Y would have to talk to each other and work out a solution. Am I missing something here? Is talking hard to do? Mergers are happening all over the place. Track the adaptor; an on/off switch at the adaptor so that the lamp could be changed with the power off; a secure mechanical connection to support the weight of the fixture; and a method to utilize two-circuit installation.

As I finish my tenure as chairman of the Illuminating Engineering Society's (IES) Museum and Art Gallery Lighting Committee, I would like to pose a challenge. Let's talk. Let's work on a CLTA. I mentioned to my colleague at Lightfair that maybe I would do what Lyndon Johnson did with the steel manufacturers in the 1960s. President Johnson invited them all to the White House, then locked the door and said, "You aren't leaving until you solve the problem." If enough people let me know that this is a good idea, maybe I will take the lead in the challenge and invite all interested parties to the Smithsonian to talk. Maybe I won't need to do what President Johnson did; maybe I will. In any event, it is not a question of which light track adaptor fits which light track, it is a question of which light track fixture works best for the design, given the correct voltage.

What are the odds of this happening? Place your bets at: Frank.Florentine@NASM.SLEDU.

Frank A. Florentine, LC has been the lighting designer of the National Air and Space Museum, Smithsonian Institution since 1985 and chairman of the IES Museum and Art Gallery Lighting Committee from 1990 to 2001.