RPI LIGHTING RESEARCH CENTER

Since 1988 the Lighting Research Center (LRC) in the Rensselaer Polytechnic Institute School of Architecture has responded to the research and educational needs of industry, government, lighting designers, architects, engineers, and the owners and occupants of buildings. The LRC staff of over thirty experts in engineering, architecture, lighting design, physics, optics, human factors, and communications works to change architectural practice through efficient lighting responsive to human needs. The staff collaborates on a variety of research, development, demonstration, communication, and education projects as highlighted below.

NATIONAL LIGHTING PRODUCT INFORMATION PROGRAM (NLP/IP)

The NLP/IP is a source of objective, manufacture-specific, performance information for efficient lighting products. To aid the acceptance of efficient lighting technologies LRC publishes Specifier Reports and Lighting Answers. Specifier Reports, a serial, provides educational information and generic and brand-name performance ratings for each efficient lighting product category, such as electronic ballasts or occupancy sensors. Lighting Answers, a serial intended for the general public, answers questions relevant to a particular lighting technology or topic. For instance, T8 fluorescent, task lighting for offices, and dimming systems for HID lamps have been reviewed in past issues.

DEMONSTRATION AND EVALUATION OF LIGHTING TECHNOLOGIES AND APPLICATIONS (DELTACF

The goal of DELTA is to demonstrate how architectural lighting can be designed, specified, and installed so buildings are more energy-efficient, cost-effective, and visually appropriate for the people who use them. DELTA assesses the lighting of a variety of commercial, industrial, and residential buildings; project sites include an A&P supermarket in Connecticut, a Sony compact disc manufacturing plant in Oregon, and a Linen 'N Things store in New York. Each site is evaluated for energy use, cost, human accommodation, how well the technologies work, and ease of maintenance. The first DELTA portfolio colorfully documents the supermarket; it is now available for $6.

LIGHTING TRANSFORMATIONS PROGRAM (LTP)

This program is LRC's response to increased government and industry interest in market transformation. LTP projects speed the creation, entry, and distribution of new, energy-efficient lighting products into commercial and residential markets. The first project involves drafting specifications for an energy-efficient exit sign that is visible and readable in emergency conditions.

OUTREACH EDUCATION

LRC's Outreach Education program addresses both basic and post-professional training. Outreach Education develops educational materials and short courses and provides instruction for those involved in the use and specification of lighting, including members of utilities, professional associations, and government agencies. Recently the LRC conducted a two-week educational program, sponsored by NUTEK (the Swedish department of energy efficiency), for lighting professionals from Sweden, Norway, and Finland.

RPI LRC (CONTINUED)

GRADUATE EDUCATION IN LIGHTING

In association with LRC, RPI's School of Architecture offers a Master of Science in Lighting degree. The LRC invites you to encourage your top students to apply for this challenging, two-year (48 credit) program. Students build a broad foundation in the art and science of lighting through a curriculum that includes courses in optics, vision, human factors, lighting technology, lighting design, and architecture. LRC's staff, many who are RPI faculty, impart their insights on design and technology to the students. Each student completes a thesis in lighting research or application.

For more information about the LRC, contact Judith Block, Marketing Manager or Russ Leisle, Associate Director (and former SBSE chair); Lighting Research Center; Rensselaer Polytechnic Institute; Troy, NY 12180—3590; (tel) 518—276—8716; (fax) 518-276-2999, (e-mail) lrc@rpi.edu.

—Catherine Loo • continued next column
LETTERS TO THE EDITOR

Note Seattle’s Highland Building center stage.

I forgot to send a note for the last newsletter but obviously missed the deadline. Please remind all ‘94 SBSE Retreat participants to send me any presentation information or course material to include in the retreat summary. I’m compiling all this info for members. Beautiful job on the last newsletter! (Thanks, Tishi) P.S. Not to be misquoted—Cranbrook was well worthwhile! Enjoy!

Mary Gazowski, University of Minnesota

[Thanks, Mary. It mis-stated twice in the last edition. Mary (not Mark) will do an incredible job of organizing and publishing the retreat materials—do not delay; retreat participants send Mary your stuff! I didn’t mean to imply that Cranbrook wasn’t worthy, just that the approach was different than SBSE’s.—ed.]

Thanks for the letter! Thought I would try out your new e-mail address and thank you for the wonderful SBSE newsletter. It’s always interesting to read other people’s perceptions of the same meeting. Your writing is full of life and is a pleasure. (Sounds like Alison moonlights at the fortune cookie factory.—ed.)

Alison Knob, UC Berkeley

[If appreciate the compliment, but I’m always most interested in the Letters to the Editor, especially since we don’t have a sports page and the end of the baseball strike isn’t in sight. Articles contributed by members are highly regarded and most welcome. I hate to subject everyone to nothing but my rantings.—ed.]

Thanks so much for the copy of SBSE News! Glad I paid my dues and am on the mailing list. SBSE is certainly made up of a fine

SBSE MISSION STATEMENT

[Here is the latest SBSE blurb. Isn’t it a good idea to review it occasionally? Does anyone out there in SBSE-land have any suggestions for improvement? I’ve challenged Mike and Cris to get it published on Internet (WWW) (see Internet Buzz, page 5).—ed.]

The Society of Building Science Educators is an association of university educators in architecture who support excellence in the teaching of environmental science and building technologies. With both individual and institutional members, our shared goals in providing quality instruction in building science are realized through a broad variety of practical activities.

The Society of Building Science Educators has five purposes:

1. Act as a support group for individual members
2. Represent the subject areas of environmental science and building technologies to outside interests
3. Offer a network for exchange of pertinent information through written, visual, and interpersonal means
4. Promote research, creative activity, pedagogical excellence, and scholarship among the membership
5. Support the institutional needs of technical education in professional curricula in architecture.

SBSE recognizes that the fields of environmental technology are evolving rapidly. These changes fuel a need for constant renewal among teachers. Moreover, educators in these areas are often isolated or lack a critical mass in schools. In addition, they have different backgrounds and varying levels of support and sources of information. New environmental building techniques require a parallel innovation in teaching. SBSE promotes this innovation through shared information and peer review. For example, napkin-stage computer scheming, sky simulators, and molecule dances are shared SBSE pedagogical techniques resulting from curriculum development retreats. Both the technology and pedagogy have research implications. Thus, the exchange of ideas, materials, and techniques coupled with new educational processes are critical infusions SBSE makes to architectural discourse.

The goals and activities of SBSE are aimed at providing greater opportunities for participation, resulting in increased membership benefits. Our current activities and resources are continually expanding, enabling SBSE to provide the following benefits.

EDUCATION

- Annual meetings featuring the exchange of course materials, slides, software, and video
- Curriculum development retreats where new ideas about teaching are developed, reviewed, and shared
- Open archive of course materials, slide images, and video documents with copies accessible at cost
- Browsing bookshelf of significant environmental technology texts
- Promotion of activities that improve and extend the level of our teaching craft
- Leadership in the evolution of university-based and professional education

RESEARCH

- Cooperative efforts to conceive, develop, fund, and execute research projects
- Collaborative team efforts that develop common scientific, technical, and instructional methods
- Outlet for creative activity, scholarship, research, and service.
SBSE MISSION STATEMENT

SERVICE
- Sponsorship and administration of special topic sessions at various national conferences (such as ASES and ACSA)
- Representation of the building science group to the academic and professional communities
- Non-competitive body of colleagues who are professionally and personally supportive.

INFORMATION EXCHANGE
- Quarterly newsletters that inform the members of meetings, events, job opportunities, and other significant information
- Annual directory of all SBSE members that includes address, phone, fax, and e-mail information
- Copies of reports from SBSE meetings, surveys, and other activities
- Annual listing of all archived material in our slide and curriculum materials collections.

As a supportive forum for the development of critical ideas, SBSE members provide the synergy to raise the level of excellence in the teaching and research of environmental technologies. Our experience has been that SBSE has had a profound, beneficial impact on the careers of both young and mature educators. The vision of SBSE is to provide sustenance for the achievement of excellence in architectural education and practice.

COOL BUILDING OF THE MONTH

The new Managua Cathedral in Managua, Nicaragua, is a feast of passive cooling and daylighting strategies. Karen Stein reports, "Legorreta oriented the central nave on a north-south axis and lined side aisles with pivoting oak doors to ease circulation in and out and exploit east-west breezes, a welcome reprieve from the tropical climate. As a result, the cathedral is the coolest place in town; apart from a place of worship, it has become an unofficial community center where people come for naps and quiet conversation." See the lavish layout in July 1994, Architectural Record.

B. Hayland

LETTERS TO THE EDITOR

bunch of people (educators) and I thoroughly enjoyed the Retreat. Nice to see my quote in print.

In response to Mohamed Boubeker's request for a good building science text, especially if he is interested in building physics as well, I can recommend a Canadian one put together by two top building scientists at the University of Toronto who work with the National Research Council in Ottawa—Hutchison and Handegord's Building Science for a Cold Climate, John Wiley and Sons.

I look forward very much to seeing you at the next SBSE Retreat! I am in the process of getting some interesting Interactive Multimedia Software together to share. I am overwhelmed at present with compiling equipment lists and costs (about $20,000 to start) to get some funding so that I can start the "fun part" of my research!

Terri Meyer Books, University of Waterloo

[I'm happy that SBSE and SBSE News are equally appealing to first-time retreaters and old timers (like Charlie Brown). Living in balmy Moscow, Idaho, I never would have thought of recommending Building Science for a Cold Climate. Thanks for the insight.—ed.]

I've changed my address to Architectural Record Lighting, 1221 Avenue of the Americas 41st floor, New York, NY 10020. No, this isn't a recent development—I moved here from the Last Bastion of the Terminally Ill (Eugene), April Fool's Day of 1993. But I found the last copy of your newsletter was April, just after my forwarding order should have expired. Archaeologists on a summer dig in my office unearthed it this morning, and I thought I ought to give you some word. [Any word?—ed.]

I attended the open house at the Lighting Research Center at Rensselaer earlier this summer; they're doing a lot of research that would be of interest to SBSE members, including the recent publication of the Lighting Pattern Book for Homes, an excellent introduction to lighting design concepts for architecture students. They've also been publishing some other extremely well-done work on ballasts, exit signs, and so on. To catch you
LETTERS TO THE EDITOR
(CONTINUED)

up-to-date, call Judy Block, 518-276-8716. She's one of their publications managers. [Thanks for the tip that provided our cover story.—ed.]

As for me, after a while, living in New York is like living anywhere. You go to work . . . eat lunch . . . go back to work . . . go to sleep . . . go home . . . go to sleep. I'm still always looking for buildings with really interesting, well-executed lighting to publish. No, my mailbox isn't stuffed with them. [Just how big is your mailbox?—ed.] After all these years, getting good buildings is still the hardest part of my job.

Charles Lin, Architectural Record

[Are you challenging SBSE to stuff your mailbox with good lighting design—to make your job easy and to keep us supplied with a continuing supply of well-crafted editions of Record Lighting? What a symbiotic relationship!—ed.]

Just figuring out a new e-mail system we have here, so I'm testing whether I can reply to you using "Nicknames." [So what's my nickname? ed?—ed.]

Thanks for including my future offspring status in the SBSE people news. It's definitely sparked renewed communication with a couple of long-lost SBSE friends. When is the next SBSE News coming out? Should I send you a 9th-month profile photo [a la Demit Moore/Vanity Fair?—ed.] and/or a photo w/ baby?

As usual, you (and Tisha) did an INCREDIBLE job with the newsletter. I am continually impressed (but not surprised). Hope all is well with you!

Gail Barger, UC Berkeley

*continued page 5

OPPORTUNITIES

UNIVERSITY OF CALIFORNIA, LOS ANGELES

Department of Architecture and Urban Design invites applications for the following faculty positions, beginning academic year 95-96.

Architectural Technology: The successful applicant will be expected to teach a combination of the following subjects: building construction, sustainable design, environmental control systems, energy modeling, building climatology, resource efficient building materials and systems, daylighting or acoustics and will be expected to pursue scholarly activities plus applied work or theoretical research.

Computing: The Department seeks applicants with strong qualifications to make fundamental contributions in Computation as it applies to architecture. The application areas include but are not limited to: visualization, urban design, construction technology, computer-aided design, design automation, design theory, knowledge bases, user interfaces.

The successful candidates will be responsible for teaching fundamentals to professionals and advanced courses to research degree students, including the Ph.D. degree, and will also be responsible for expanding research in their area. It is expected that these tenure track appointments will be made at the assistant professor level; however, depending on exceptional qualifications, appointment at a higher rank may be considered.

Candidates are asked to submit an application which includes a curriculum vitae, the names and addresses of at least three references, and non-returnable samples of work to Jurg Lang, Chair, Department of Architecture and Urban Design, School of the Arts and Architecture, UCLA, Los Angeles, CA 90024-1467. UCLA is an Equal Opportunity/Affirmative Action employer. The Department of Architecture and Urban Design seeks diversity and encourages women and members of minority groups to apply.

Deadline November 1, 1994.

James Wines of S.I.T.E. is doing a book on green architecture and the relation of landscape to buildings for Benedikt Taschen Verlag in Germany. James is looking for people who are doing significant work in green architecture, particularly new architects whose built projects show a great concern for integrating shelter with context and the conversion of sustainable design into strong aesthetic solutions. Nominate projects soon; the book is on a tight production schedule. For information, call James Wines or Seth Cornell at 212-254-8300, fax 212-353-3086, or write S.I.T.E.: 632 Broadway: New York, NY 10012. 🎓

PEOPLE NEWS

Susan Ubellohde can finally be found at the University of California at Berkeley. She's on internet, too. subh@cei.berkeley.edu.

A team of Cal Poly SLO faculty and alums, including Polly Cooper, Ken Haggard, Henry Hammer, and Margot McDonald, received a 1st Award in the AIA/JIA Sustainable Community Solutions Competition. Their project, Los Osos, California: A Sustainable Community within a Sustainable Watershed, was selected as one of only three U.S. winners from among 400 entries from 50 countries.

Mojj Navvab's Sky Simulator and Related Research" was the featured article in the University of Michigan College of Architecture + Urban Planning Research News. The 36kW, 30-foot, dome artificial skylight was designed to: (1) simulate both uniform overcast and clear sky conditions, (2) minimize horizon scale error, (3) animate all sun motions, (4) allow for variable ground reflectance, (5) capture all illumination data, and (6) record each simulation using a video luminance scanning system. The system features 72 computer-controlled, tungsten-halogen lamps and a 450-watt, sealed beam sun simulator; computer-controlled dimming to model changing sky conditions; a rotating model platform to simulate time-of-day in conjunction with sun simulator motion; a multi-channel, data acquisition system which can read up to 20 light sensors; and a video scanning system for quantifying luminance distribution in the model. For more info, contact Mojj at 313-936-0228. 🎓
INTERNET BUZZ

I did receive your excellent newsletter just before your e-mail. I have to confess that I had missed the by-line correspondence! Given the innovative nature of the SBSE organization, I wonder when it would be appropriate to establish a WorldWideWeb server? I'd be happy to "donate" a little space and time to this side of the world. Ask around about Mosaic and the WorldWideWeb. They are much more accessible ways of reaching into the aether than ftp or telnet or even standard "news" readers. Thanks for the note and for the efforts with SBSE.

I hope to get leave to travel for 6 months in the U.S.A. In the second half of both 1995 and 1996. We can take our Research and Study leave of one year and split it like this. I'm very interested in the timing of the mid-year SBSE events. Late June might be awkward; early July would allow time to do marking before I leave (our first semester finishes around 17-20 June). Please keep this in mind if there is some aspect of choice. My plan is to investigate how design teams on large buildings (well, larger than houses) use the electronic design tools currently available for environmental design—things like DOE2, Lumen V, and Radiance. This builds on my work to generalise the lessons for "environmental" science wishing to formulate design tools from their research for architects. I am currently preparing a proposal to spend each 6-month period based at LBL, home of both of the software packages. I would welcome your comment on whether there is another venue/organisation where I should spend some time, as I may not be as familiar with the U.S. scene as you are. Sorry to add the extra long query at the end here, but at least it demonstrates the power of the medium!

Mike Donn, Victoria University of Wellington
mike.donn@vuw.ac.nz

[Mike, it's great to get e-mail from afar and so easily, too! When you make your pilgrimage to the U.S. make sure you visit Cris' playhouse in San Francisco, the PG&E Energy Center. It is also worth trudging to NREL in Golden, Colorado, and Amory Lovins' Rocky Mountain Institute. Our summer events aren't set yet. The SBSE Annual Meeting will be held with the ASES Passive Solar Conference in Minneapolis in July. Any other itinerary advice for Mike?—ed.]

[You e-mail addicts don't realize the effect you have on layout—do you know how many fonts out there don't have lower and upper case, the 1 (arabic numeral one) and the l (lower case L) look alike, or the I (upper case I) and the l (lower case L) are indistinguishable. Here's hoping the Zapf Chancery font makes these e-mail addresses clear and easy-to-read. If you have suggestions for a better typeface, let Bruce know.—ed. 's ed.]

I'm seriously hooked on this Internet stuff with particular emphasis on the WorldWideWeb (WWW). Have you seen it? If not, find someone on campus with access (typically via the Mosaic program), and take a look. Then agitate for a connection.

My favorite connection of the day is a machine at Purdue (http://thunder.atms.purdue.edu/index.html) that provides hundreds of weather images—infrared and visible satellite images, current weather maps, forecasts—with updates every half hour.

In the meantime, I've been thinking about writing WWW pages on Vital Signs and SBSE. Do we have a brief description or blurb sheet for SBSE? I could also include a representation of your fine newsletter. What production environment do you use? [Pagemaker.—ed.] Would it be possible to get the fodder that goes into Pagemaker—Word or ascii text files and some graphic images (tif, gif, eps)?

Cris Benson, UC Berkeley
cri@ced.berkeley.edu

[You sure are overly nerdy about and addicted to Internet. I'm looking into Mosaic—as you urge. Heaven knows that I have spare time to spend scanning WWW. Within a couple of days both you and Michael Donn mention it as being primo and that SBSE stuff should be on it. I want to...continued next column]

LETTERS TO THE EDITOR [CONTINUED]

[Thanks for filling the GZB stick-up-to-the-editor role. Yes, definitely send a photo or announcement.—ed.]

INTERNET BUZZ [CONTINUED]

...put you and Michael in touch—I think you've got some common interests (see above).

In the interest of promoting SBSE via Internet, I've typed up our standard blurb (and updated it a bit) (it begins on page 2). As for the newsletter, do we really want to do this? Hmmmm! I'll turn that over to my expert and layout slave, Tisha.—ed.]

Design and layout of the SBSE News is accomplished by Pagemaker for PC. Bruce pastes up the graphics the old-fashioned way, by hand, since his sources are often slides, and he can get a good copy from the color copier. Also, photocopy art can be interesting. If, however, you have a graphic that you would like to have placed with your article, eps format is preferred although tiff and other graphics formats can also be imported. Corel Draw (PhotoPaint and Trace) is the package of choice for most of this graphics work, although I have been also fiddling with Adobe Illustrator, Aldus Freehand, and Photoshop. You should keep in mind that the printer now in use is an old 300 dpi PostScript printer. With any luck an 1800 dpi LaserMaster will come on line soon, but don't hold your breath.

Text files are pretty straightforward. Bruce puts the fodder in a Word doc, I edit, occasionally he will put in the style tags (which makes the process more efficient) but I will usually style tag in the story editor, and then it's layout time. The story editor in Pagemaker is a whiz and rightfully puts Word (even for Windows) to shame with its flexibility and power. If you're going to send electronic documents Word (or DOS or Windows), WordPerfect, and ascii text formats are all okay. Word works best for Bruce since the transfer from WP to Word is never smooth. (WP to Pagemaker is okay unless you do weird things like use the equation editor and not save it as a graphics file.) If you're talking about exporting, Pagemaker files can be exported with or without style tags to Word or ascii file formats (among others).
As far as the WWW is concerned, would sending a printer file (.prn) work? As with service bureaus, though, font compatibility probably remains an issue.

Cris, are your questions answered? We can wake everybody else up now.

One thing we could try would be for you to send the FM document and I could deconstruct it. Wow, architectural training meets practical application. Go find WWW, it will make you giddy. More to come later, but first a class or two to prepare.

Cris Benton, UC Berkeley
cri@cals.berkeley.edu

On the WWW front, have you seen Mosaic yet? I have secured space on a UCB server for SBSE if we decide to go that route. I've found a nifty template for MS Word that produces the HTML files required by WWW and have produced a few reasonably handsome pages before putting the fun stuff down to concentrate on work. So, on closer examination it appears that WWW offers an almost ideal medium for exchange of many SBSE artifacts; the tools to work the medium are relatively straightforward. The KEY, however, is our members' awareness of WWW and our willingness to take the first steps to connect. How do we encourage our folks to take the plunge? [Offer freebies, beg shamelessly, or just push 'em in.—ed.] Could we survey our readership to see how much interest there is, who has what skills? Perhaps a clip and fax paper form, or would the idea of newsletter mutilation be too disturbing? [Ouch! It cuts to the heart. Not!—ed.] More cohesive thoughts later, back to proposal writing.

Cris Benton, UC Berkeley
cris@cals.berkeley.edu

[Crissright, e-mail makes "talking" to someone on the other side of the world easy—it just takes time and persistence to get started. Interested readers, please, pretty please, oh please (BT grovels and kowtows) contact Cris by (1) e-mail, (2) fax, (3) phone, or (4) U.S.P.S. mail. We should have a good idea of what, who, how, when by the December SBSE News. More then.—ed.]

WINTER ISSUE SUBMITTAL DEADLINE—DECEMBER 1.

SEND WORD—ANY WORD!

Thanks to all of you who contributed letters, announcements, or articles! Keep 'em comin'! Send to address below, fax something interesting to 208-885-9428, or if you're a commuter on the superduper infohighway, slug my modem with your hot item (e-mail it to bhaglund@aiprey.csw.uidaho.edu).•

SBSE News
To Bruce Baglund
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Moscow, ID 83844