Three SBSE events happened in rapid succession—the retreat at Sorensen’s, Tool Day at Patagonia, and the annual meeting at ASES in Reno. All were well-attended and well-received.

The 2002 Retreat—Sorensen’s Resort, Hope Valley, Ca (June 11–14)
Organizers Mark DeKay, Sandra Mallory, and Robert Marcial put together a great retreat at Sorensen’s [“Where the air-conditioning is aspen powered.” Our kind of place!–ed.]. Forty SBSEers, amazingly half of them first-time retreaters [a healthy sign!–ed.], gathered to discuss “Ecological Literacy: Greening the Architectural Curriculum.” And although a highway ran through it, the venue stimulated serious discussion and fostered valuable networking. The weather was gorgeous, the cottages comfortable, and the food delicious.

Continuing the tradition begun at Taos, retreat details are being archived on the SBSE web site <http://www.sbse.org/retreat/>.

Patagonia Tool Day—Patagonia Service CTr, Reno, NV (June 14–15)
Dave Abeloe, a 24-year Patagonia employee, gave an insider’s history of the company and a marvelous, comprehensive tour of the office and warehouse spaces. His talk and walk provided insights into the building’s design process, its systems, and operation. Our collective reaction was that Patagonia was the green architect’s ideal client, willing to invest in strategies with moderately long payback times. The daylighted, unair-conditioned warehouse and the daylighted office offered questions about how to tweak the details, rather than how to overcome colossal design flaws. It’s an exemplary green building.

Theoretically, the afternoon through morning format allowed us to use HOBO data loggers to gather temperature readings overnight. However, a bug in Onset’s Boxcar Pro 4.0 software caused most of the HOBO XTs to fail to record data. [Upgrading to Boxcar Pro 4.2.10.1 fixes the laptop power management problem. The upgrade is available at: <http://www.onsetcomp.com/Support/H_S_Support/2279_hsfiles.shtml>–ed.] Undaunted by disappointing data gaps, the teams ferreted out the answers to many puzzling questions about the building’s performance.

The Joys of Summer—an SBSE Triple Header

Don Aitken dropped in on Sandra, Mark, et al. at the retreat.
Meier Atrium Cool for Phoenix?

As usual the SBSE list server has been churning up delectable topics. When Harvey Bryan sent the following message, I invited him to expand his critique into an editorial. The links in the e-mail are entertaining, too. Enjoy.—ed.

Harvey’s list server message. “As the weather is starting to get hot in Phoenix, our local press is again having a lot of fun with Meier’s new Federal Courthouse. I wrote to everyone last summer about this building. The irony is that this week at the AIA’s National Convention this building is being given a national design award. Check out the most recent news article at <http://www.azcentral.com/news/articles/0506fedcourt-atrium.html>.

[The site claims that Meier’s inspiration for cooling the atrium came from a visit to Hooters. Investigate my lead.—ed.]

At least that was the plan. But as press deadline approached, Harvey literally had to put out a couple of fires. ‘Diane’s family has a cabin very close to the Rodeo Fire. So far it has not burnt. Hopefully, I can get some additional data on this summer’s courthouse performance and write up something for the fall newsletter.’ So I’ll cover for him by quoting from the article, “Courthouse Atrium’s Dual Identity: Blunder, Shining Symbol,” Jon Kamman, The Arizona Republic, May 06, 2002, and commenting on it.—ed.

From Jon Kamman’s article. “The huge glass house the federal government built in downtown Phoenix has its origin about a mile away at Hooters. Not in Hooters, the bar and eatery known for minimalist waitress attire, but just outside, where customers sit at open-air tables along the walkway into the Arizona Center. Even in temperatures well above 100°F, there they lounge, shaded by awnings and cooled by … a robust misting system.

In the heat of a June afternoon in the mid-90s, Arizona’s then-Chief U.S. District Judge Robert C. Broomfield and acclaimed New York architect Richard Meier, along with their retinue, took a shirtsleeves walk through downtown. The idea was to give the designer a sense of the urban core where his courthouse would become reality. ‘Here was this restaurant we walked by,’ Broomfield said. ‘Here’s this misting system. His (Meier’s) head started to turn.’

The rest of the group walked on a ways before noticing that Meier had stopped. ‘We’d lost him,’ Broomfield said. ‘That was the genesis.’ In Meier’s vision, the wispy sidewalk spray soon evolved into fog on such a grand scale it could tame 5 million cubic feet of torrid air under glass. [I imagine judges in wet t-shirts.—ed.] Or at least it was supposed to work that way. In its first summer, it didn’t. And in the winter, the absence of any heating sometimes turned the 50,000-square-foot atrium into a see-through ice box.

“A daring design. As if a glass hall spanning a city block and rising 100 feet to meet a roof of skylights were not a sufficiently daring statement in the aftermath of the 1995 blast that destroyed the federal building in Oklahoma City, the atrium also taunts M other Nature.

There is something peculiarly defiant about designing a glass box for a U.S. courthouse in a hot, dry climate,’ an Architectural Record review says. Unmentioned are 10 weeks of monsoon humidity. The article lauds the atrium as an ‘environmental, functional (and) symbolic success.’ The key to understanding the atrium, Broomfield emphasizes, is that the courthouse proper is an L-shaped, conventionally air-conditioned, highly secure working area, while the atrium is ‘transition space,’ a pass-through never meant to be occupied for more than a few minutes at a time. ‘If people expect the atrium portion to be the same as any other building in bad weather, they just haven’t listened. It’s a transition space,’ Broomfield said. But critics point out that court security officers are stationed in the atrium all day, and jury pools are ordered to wait there until being summoned for trials. Guards, sweltering in short-sleeved shirts in the summer and warming their gloved hands in front of portable heaters during the winter, change shifts every 90 minutes.”

[See Harvey’s list server message.]

—Harvey B ryan, B ruce H aglund
The Joys of Summer [continued]

Tool Day highlights and results are posted at <http://www.aa.uidaho.edu/bldgvital/PatagoniaToolDay/>. [Kinda like Sports Center for building scientists–ed.]

The 2002 Annual Meeting—at ASES Solar 2002, Reno, NV (June 18)


1. Treasurer's Report. Sandy Stannard reports, in absentia, total assets of $8,117.67. She predicts $8,365 in revenues with $6,045 in expenses for next year.

2. Newsletter. Thanks to contributors for providing content. Bruce H. Aglund will continue to edit the SBSE News while on sabbatical. Diane Armprist will handle production and distribution from the University of Idaho.

3. Membership. We have a record 282 members worldwide. Renewals are due on the summer solstice. Paid members will again be listed on the SBSE web site. A discussion about international dues ensued. We'll look into accepting credit card payments.

4. SBSE Web Site. Robert Marcial <rmarcial@uclink4.berkeley.edu> is updating the web site—the 2002 retreat report will be added soon.

5. Student Scholarships and Awards. Six retreat scholarships (courtesy of SBSE) and five traveling scholarships (courtesy of Fuller and Jane Moore) were awarded. Students will also be given best ASES paper and presentation book awards, sponsored by John Wiley. See our web site <http://www.sbse.org/retreat/> for details.

6. Peer Review Network. Going up for tenure or promotion? Contact known reviewers directly (becoming fairly common) or contact Walter Grondzik <gzik@polaris.net> for suggestions or a list of potential reviewers. We can also work directly with administrators to provide independent or blind (to the candidate) reviews.

7. Retreats. Forty SBSEers attended the 2002 retreat (see page 1, the web site, and the Fall 2002 SBSE News for details). We've made tentative plans for the next three retreats:


8. Patagonia Tool Day. Twenty-five participants conducted guerrilla analyses on a very green building with ideal owner/occupant. Results will be posted on the SBSE web site.

9. Sharing Educational Resources. Digital Slide Collection—Recent additions include Norbert Lechner’s illustrations from Heating Cooling Lighting, Mark DeKay’s illustrations from Sun Wind and Light. New contributors can send Kodak CDs with non-copyright images (original photos and art work) and thorough annotation to Ball State.

Sun Angle Calculators—SBSE obtained the copyright from Pilkington. Of the 1,000 printed, 400 have been sold, close to break-even. Available for $15 each. Advertisement in Solar Today or ISES magazine suggested.

Paper-Based Archives—Leonard Bachman still has custody of these relics.


Thanks to all SBSEers for their efforts and contributions! – Bruce H. Aglund
SBSE People

- **Lilliana Beltran** is moving to Texas A&M.
- **Gail Brager** (who made pancakes for the inaugural retreat—ed.) was promoted to Professor at UC Berkeley and in January became an ASHRAE Fellow (supposedly only the 4th woman in ASHRAE to receive such an honor!).
- **After completing her Master’s work at Idaho, Yelena Chenchik** is returning to Chelyabinsk, Russia, to teach sustainable architecture at South Ural State University.
- **Martin Gold** was awarded tenure and is looking forward to continuing his work at the University of Florida.
- **Rob Peña** is leaving Van Der Ryn Architects to teach at Cal Poly SLO.
- **Kathryn Prigmore** has been inducted into the AIA College of Fellows.
- The Passive Division of ASES has named **Don Prowler** (posthumously) its 2002 Passive Pioneer.

Research Initiatives

**Better Bricks Daylighting Lab**

The Northwest Energy Efficiency Alliance and the University of Oregon announced an agreement to open a BetterBricks [See <http://www.betterbricks.com/> for lots of cool stuff.—ed.] Daylighting Lab in June 2002, in downtown Portland in the University of Oregon architecture program's building. “The architects in this region are eagerly anticipating the opening of the Lab,” said John Blumthal, president of the Oregon AIA chapter. “Having a convenient resource like this in Portland will allow professionals to gain a better understanding of daylighting and help them incorporate the use of daylighting into more of their projects and designs.”

The UO Energy Studies in Buildings Laboratory will be the prime contractor for the project and will manage the Lab. “There are currently two other daylighting labs in the Northwest, one in downtown Seattle and one in Eugene,” said G.Z. Brown, ESBL Director. “Our concept is that the Portland, Seattle, and Eugene labs will have similar capabilities, but that each lab will have different strengths the others can share.” Architects and designers will be able to consult the Portland Daylighting Lab on lighting schemes, the use of sun shades, glazing materials for windows, model studies, building orientation, and how to minimize glare and optimize diffused light. Some of the features of the lab will include a mirrored box sky and heliodon; micro computers, software, and graphic design tools; model and prototype shop; field instrumentation; exhibit space; group and individual work and assembly space; and a library. “The Daylighting Lab is just one of many resources that BetterBricks has to offer,” said Dave Hewitt, initiative manager for the Alliance. “BetterBricks, through its services, wants to build a culture in which the efficient use of energy is a core value in the northwest commercial building industry.”

-G.Z.Brown

**Hay Fund News**

Alfredo Fernandez-Gonzalez received an additional grant from Harold Hay and the Evelyn and Harold Hay Fund to complete the construction and instrumentation of six full-scale (8' wide, 8' tall, 16' long) passive solar test cells installed in the Ball State architecture school entry court. These test cells will be monitored during the next year as part of Alfredo’s research on the effect of the mean radiant temperature on human comfort in passive solar buildings. A web site for this project including a teaching module and web cam images of the test cells with performance data will be launched in fall. Alfredo is hoping that his web site becomes a teaching resource for ECS faculty around the country.

-Alfredo Fernandez-Gonzalez

**Integrating Sustainable Design and Affordable Housing**

Mary Guzowski and Lance LaVine (with colleagues from architecture, wood and paper sciences, and the Center for Sustainable Building Research) are collaborating with the Amherst H. Wilder Foundation and the Frogtown Community Development Corporation (CDC) to integrate sustainable design and affordable housing in 10 pilot demonstration houses. The Pilot Demonstration House Project is Phase One of Project 20/20, an effort that will develop 40 demonstration-housing units (including 20 single-family homes and 20 rental units) that integrate affordability with sustainable design, healthy construction, and design excellence. House One is expected to be under construction in Fall 2002.

-Mary Guzowski

SBSE met at ASES in a room illuminated solely by daylight—amazing, given the casino venue!
John Reynolds' latest book, Courtyards (2002, New York: John Wiley and Sons, 243 pp.), presents a survey of examples, contemporary design guidelines, and several detailed case studies. It begins with a brief history of enclosed courtyards. Next, numerous examples, primarily from Spain and Latin America, are surveyed in detail and include drawings and climatic data. Finally, and most important, there is an extensive section containing 44 explicit planning and design guidelines with their underlying rationale.

Not only is this book a wealth of information about this building type, it is a visual feast. There are over 50 color photos and numerous plan/section/axonometric and unfolded elevational drawings that clearly illustrate the complex spatial relationships of this building type. **Entry sequence** describes the transition between the public street and the courtyard. **Orientation** of the courtyard is often determined by that of the street outside; it affects interior microclimate and comfort, and, in some cultures, may be determined by religious considerations. **Formality and symmetry** range from all four sides being identical to the informal extreme where no two sides are alike. **Exposure** is a measure of the degree of connection to the sky and may be quantified in two indices: Aspect Ratio (which relates the area of the courtyard floor to the average height of surrounding walls) and Solar Shadow Index (which relates south wall height to north-south floor width). The latter is an important design parameter in colder climates. **Plants** are a way of characterizing the courtyard on a continuum from lush to barren; Appendix A makes specific recommendations for courtyard plants. **Facade openness** expresses the visual, circulatory, and ventilation connections between the courtyard and surrounding rooms; elements include arcades, doors, windows, and solid walls. Vertical circulation includes stairs, at least one of which is found in every courtyard building (even single-story houses have stair access to roof terraces).

Examples of the application of passive cooling and heating methods in the design of courtyards abound. Reynolds is convincing in his discussion of how the lives of occupants are enriched by the daily and seasonal rituals of their participation in the adjustment and maintenance of the courtyard elements. Described as “thermal sailing,” this occupant participation is a familiar concept in passive solar buildings and particularly appropriate to courtyards. For example, one adjustable device, the toldo, literally suggestive of a sailboat, is a movable canvas covering for the courtyard opening that can be adjusted to admit or shield the warming effects of the sun. At night it can be adjusted to regulate radiation cooling to the night sky. The measured improvement in temperature control achieved using the toldo is remarkable.

The most significant and useful part of this book is Chapter 12, “Guidelines for Planning and Design.” These 44 guidelines are divided into 8 groups: City and Courtyard; Cars and Courtyards; Courtyards and Neighborhoods; Courtyards and their Buildings; Courtyards, Daylight, and Aspect Ratio; Courtyards and Cooling; Courtyards and Winter Sun; and Courtyards and Arcades. Each of these groups begins with a discussion of the design issues involved, followed by the specific design guidelines and explanations. In appropriate cases a design example illustrates how the guideline is applied.

Courtyards is a major contribution to architectural literature and is recommended reading for all of you interested in the design of livable, energy-responsive buildings.
Arup Announces SBSE Fellowship

Bruce Haglund has been granted a sabbatical for AY2002-03 to serve as the SBSE Fellow at Arup's London Office. Working with Chris Luebkeman, Director of Research, and Andrew Sedgwick, Head of the Lighting Group, he'll have the opportunity to “look behind the curtain” at Arup’s process for creating well-integrated, sustainable buildings that set the standard for green architecture. During his sabbatical Bruce will participate in shaping Arup’s evaluation methodology for assessment of the performance of some of their landmark buildings and will develop a series of case studies and original lecture materials from site visits and Arup’s archives and designers. (If I don’t screw up too badly, Arup may welcome other SBSEers in the future.)

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Charlie Brown plotted ‘SBSE space’ at the Strategic Planning Meeting.

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The Architecture of Glenn Murcutt

One of the things discussed in the SBSE Santa Barbara retreat in 1997 was the gap between teaching architectural science and design. Some of us felt marginalized in architectural schools. Some claimed that many notable buildings designed by prominent architects and discussed by design instructors actually did not perform well at all. Is this still the case? (Duh! See page 2.) I did wonder, however, if part of the reason for this gap was actually the narrow way we teach architectural science (e.g., thermal comfort, heating, cooling, lighting, energy efficient, passive design, and other environmental issues). We teach too specifically and out of the design context, so when students leave our class to go back to the drawing boards they just forget about building science. When they look at magazines showing buildings that claim to be comfortable, energy efficient, and environmentally friendly, many find these buildings too mechanical, uninteresting, boring, and unexciting.

I am lucky to see and experience some buildings that are beautiful and perform well. Maybe the word ‘beautiful’ is not even the right word (I am having a hard time trying to find the right adjective). The word should be something that appears in your mind when you honestly can say, “This is architecture.” These buildings were designed by Glenn Murcutt, that Australian architect just awarded the 2002 Pritzker Prize, the Nobel Prize in architecture.

I did not know of him or his design work until I started teaching in Adelaide in 1998, where I heard his name mentioned frequently by colleagues and students, so I tried to find out who this ‘bloke’ is. As I looked through the few books about him and his designs, I kept saying “Wow! That’s really something.” Never before had I seen an architect who pays so much attention to detailing something ‘trivial’ like roof gutters and down-pipes, all beautifully done. The most notable feature of his designs are the window or door shutters. Not only are these louvered shutters functional, they also create the play of shadow and light on the window or door behind them and in the room inside. These shutters and windows are movable, so sometimes the inside space becomes part of the outside landscape.

The books claimed that Glenn Murcutt was very conscious of the environment surrounding the buildings and that he ‘worked a lot’ with the wind, sun, and earth. Was that true? Did the buildings perform well in reality? There was only one way to prove it—conduct a Vital Signs-like project, although I was not sure if I would be able to do it because most of his buildings are private houses. Also he is famous; he might not want the actual performance of his designs revealed.

I gave it a go anyway; found his phone number in the White Pages and rang him. On the third try someone answered, Glenn himself—he has no secretary. I explained what I wanted to do, and to my surprise, he didn’t mind at all. He is only request was that, because those buildings were not his, I ask permission from the owners. During our unexpectedly long conversation, he talked about his design philosophy “running with the contours; following the existing drainage patterns; trying to not disturb the existing lives of the plants, birds, and other creatures on the site; stealing the colours of landscape; bringing in the perfumes of nature; responding to the local climates; and being careful and responsible in selecting the materials to be used in the building.” I was entertained by his ‘talk’ and became even more curious to see ‘his’ buildings.

Calling the owners of the houses was an adventure. I didn’t know these people; I only knew their last names and the general location of the houses from the books. I didn’t want to bother Glenn any further so I searched the White Pages on the Internet. Sometimes I found there were five, “Smiths” living in the same region. So I rang each of them and said, “I would like to study your house designed by Glenn Murcutt.” Most of them would say, “Glenn who?” And I said, “Sorry, I must have dialled the wrong number.”

Finally, with a limited time and budget I could only monitor five of Glenn’s buildings—two houses in South Australia, two summer holiday houses in the Blue Mountains area of New South Wales, and the Visitor Centre of Kakadu National Park (one of the world heritage parks) in Jabiru, Northern Territory. The latter was a collaborative work with Tropo Architects of Darwin. I also visited the Arthur Boyd Centre in Bundanoon, but did not do any monitoring due to a limited budget.
On my first visit to one of the houses in South Australia, I saw a farmhouse that looked ordinary from a distance, but as I got closer, the house looked like it just grew out of the ground. There were no fancy diagonal lines and Zaha Hadid-like exciting shapes, but the building form, colour, and texture seemed to belong to the site. My eyes could not blink as I walked into the house. I just whispered, “This is Architecture.” That was only the second time I said that (the first time was when I visited Louis Kahn’s Kimbell Art Museum in Fort Worth). The space, although relatively small in plan, was airy, rich in daylight, and there was that play of shadow and light. The lines were clean and simple, but every detail was paid so much attention. It was quite hot outside (it was the summer of 1999), but the house felt really cool and breezy inside.

Although all the buildings I visited were great, my “favourite” was the Mt. Wilson house in the Blue Mountains. I could not wait to jump out of the car. As we approached the house, I had this wonderful feeling. The first built structure we saw was the garage/ workshop, and I could not remember seeing a beautiful garage before (‘a garage, why bother?’). We walked toward the house on a board walkway which spanned a pool (a water collector for bush fire protection). In front of us was this house, clad in corrugated steel (as are most of Glenn’s buildings), built on steel structures and surrounded by large glass windows/ doors which had sliding, operable louvres. The house sat beautifully among the trees, evoking a feeling of serenity. As we walked inside the house, we still felt like we were outside as the large glass “partitions” that occasionally separated the inside from the outside could be opened totally. The pool reflected the afternoon sun, casting slow-moving shadows on the ceiling. It was ‘magical.’

Did the buildings perform as claimed by the books? After months of monitoring I would say “Yes, they performed well within the objective of the design.” The two residential houses in South Australia were comfortable both in summer and in winter without using any mechanical systems (28°C maximum when it was 40°C outside, and 14°C minimum when it was 0°C outside). I thought the winter was rather cold, but the occupants very rarely (or never) turned on the radiant floor heating. (The only thing about Glenn’s design that I disagree with—even though it uses the off-peak tariff, it still uses electricity. Using heated water is, perhaps, a better solution.) Their utility bills were low compared to standard houses in South Australia. The Kakadu Visitor Centre was rather warm on a sticky, hot summer day, but the rammed earth walls (selected for their colour and earthy look) actually helped delay the external heat gain during the day when the Visitor Centre was open. A simulation model predicted that lightweight materials, as commonly suggested for passive buildings in hot–humid climates, would make the inside as warm as the outside. The two holiday houses in the Blue Mountains were wonderfully comfortable in summer, autumn, and spring, but cold in winter without the presence of the occupants. “…. the comfort performance of a Murcutt house cannot be assessed in the absence of occupants. Somebody is needed to feed the fire and adjust the sun control blinds, windows, etc.,” wrote one of Glenn’s clients.

I monitored only a very small number of Glenn Murcutt’s buildings, but having seen and experienced some of them, I am convinced that others would perform as well. I am glad that the Pritzker Award Jury chose Murcutt for the award. “H is houses are fine-tuned to the land and the weather… He uses light, water, wind, the sun, the moon in working out the details of how a house will work—how it will respond to its environment” (citation from the jury as published in Architecture Australia May/ June 2002).

The result is indeed an architecture that not only is poetic (now that’s a better word than ‘beautiful’), but also proven to perform very well. I hope Murcutt’s example will encourage our students to believe environmentally sensitive designs do not have to be boring and uninteresting, and suggest to us, the architectural science educators, to be more poetic and designer-oriented when teaching environmental issues.

— Veronica Soebarto

Some results of the studies were published in:


Letters

At the SBSE retreat there were several papers on Eco-Literacy as well as some shared resources. Steven M oore, U T Austin, presented a paper entitled, "The Disciplinary Blinders that Enframe Sustainable Design," which presented some assertions for consideration by the group. There was lively discussion of some of his points and occasional controversy (of the best sort). Thank you Steven, for putting your ideas down on paper and presenting them to the group.

Unfortunately, the retreat was so full of interesting ideas, there was too little time for thoughtful discussion. I spoke with Steven and suggested that we allow a response to his paper and an opportunity for him to reply to the response. He agreed that it might be interesting. If the group expresses interest and the News accepts the idea, I will prepare a brief analysis of Moore’s argument and forward it to him. He can respond. We can publish the "eco-literacy papers" in a forthcoming issue. Beyond that, I want to thank Roberto M arcial, Sandra M allory, and M ark D eK ay for organizing a wonderful retreat and Bruce for always keeping us in touch with what is going on.

—M arc S chiler

Have you lost your mind? You devoted far too much time and space to my list and my bridge proposal. What are people going to think when they see the way you’re promoting an old geezer? Of course, I’m pleased, but I’m also embarrassed. You’re running a high quality paper, and you don’t want to dilute it unnecessarily.

It wasn’t the embarrassment that spoiled the pleasure though; it was reading about Don Prowler that did it—51 years old! What a sad surprise.

—M alc o m W illis

Thanks for your support. About 30 professors responded to our offer for free review copies of our resources. Some provided feedback. I’m confident in making the following points:

• continued next page

Conference Reviews

Envi roDesign Conference

ED 6, the sixth Envi r oDesign Conference, "Sustainability in Action," held in April in Seattle, was impressive for a number of reasons. First, over 1,200 people were willing to pay a hefty registration fee to learn more about sustainable design. Most of them were interior designers, primarily interested in sustainable materials. Second, the quality of the plenary speakers was first rate. Robert Kennedy, Jr. was truly inspiring in his keynote address describing River Keepers, and by extension, the lessons that apply to our nation and the planet (the standing ovation seemed to go on forever—he has my vote for President right now). Bill M c Donough and M ichael Braungart did an especially good version of their standard road show (also available on CD). But the biggest surprise was Governor John Kitzhaber of Oregon, who also left the audience standing and cheering after he told them how to get a state bureaucracy turned around and going in new directions.

It was the kind of conference where you meet lots of new people from many different fields who are struggling with the same problems we are. The single topic in which everyone seemed interested was LEED. Its momentum is now palpable; all these designers appeared to understand the principles involved and were prepared to let it guide their designs. Their interest seems not necessarily driven by their clients, but rather by a genuine concern for doing the right thing, giving them a competitive advantage.

Our own workshop on Designing High Performance Sustainable Buildings was heavily over-subscribed. We had anticipated 20–40 people (our usual at AS ES), but over 140 signed up, and more arrived at the door. Needless to say our usual technique of dividing people into small teams around a laptop would not work, which necessitated a quick adjustment in our presentation format. The other workshops that I attended were all exceptionally informative and well done. I do not know much about the success of prior conferences, but if next year is as good, I hope to be there. [Proposals for ED 7 presentations are due August 1. See <http://www.environdesign.com> for details.—ed.]

—M urray M ilne

ARCC/EAAE Conference on Architectural Research

The School of Architecture at M cG ill University and the City of M ontréal provided a wonderful setting for the 2002 ARCC/EA AE Research Conference, 22–25 M ay 2002. This joint international conference takes place every two years. How intriguing and fresh to have no conference theme other than architectural research. This strategy resulted in a wide range of topics that were sub-themed into sessions within the conference. The discussions were lively and wide-ranging—given the various areas of expertise of the audience.

SBSE attendance and participation was notable! Lucie Fontein, one of the conference chairs (along with M artin Bressani [M cG ill] and Stephane H anrot [EAAE]), did a stupendous job of organization. The food provided—(breakfast, snacks, lunch, gala dinner, and in the true French manner, wine with our midday meal)—was not only sustaining, but elevated the conference experience. André Potvin, of U niversité de Laval, conducted an excellent tour of the new CDP Capital Center, accompanied by the architect, Eric Gauthier. The CDP boasts a “façade intelligente”—a version of a double-skin sys-

continued next page
tem. Much of the technological prediction about the façade performance was carried out by André and his team at Laval (GRAP—Groupe de Recherche en Ambiances Physiques). André also presented a paper about the CDP wall system and its development. A delightful find was the Palais du Congres (right across the street from the CDP) which looks like a tasteless circus with its use of a brightly coloured checkerboard curtain wall. The experience of the interior was surprisingly delightful and not at all overwhelming.

Brooke Harrington (Temple) gave a wonderful talk about “Freestanding Chardaks of the Balkans.” Fatih Rifki (NC State) gave two papers (programming workplaces and sustainable development in M ebane, N C). Two master’s students presented as well—Yelena Chenchik (Idaho) on developing a sustainable architecture curriculum in Russian universities and Nick Rajkovich (Oregon) on thermal comfort in arcades of Cleveland [Come on, can you ever be truly comfortable in Cleveland?—ed.]. I presented 4 papers (has to be some sort of record—for me at least!—and a sure way of ruining a perfectly good time [Lesson for neophytes never submit more than 2 abstracts!—ed.]) on Double Skin Façade Systems (2), Teaching Skins, and Window Performance.

Keynotes were given by Alberto Perez–Gomez, “Beyond Globalization: Priorities for Research and Education and Architecture” (Alberto also acted as guide for the tour of Montréal); Antoine Picon, “Building Technologies, Imagination and Utopia” (Antoine, unlike most keynotes, attended/participated in the majority of the conference); and Francine Houben of Mecanoo Architects (the Netherlands), “Dutch Mountains: The Aesthetics of Mobility.” Francine also gave a pitch for the 2003 Architectural Biennale that will take place in the Netherlands—topic: mobility. The Canadian Center for Architecture provided the backdrop for Francine’s talk and we toured the current exhibit, “Laboratories.”

I plan to attend both the regular ARCC Conference in 2003, tentatively scheduled for Temple University in Philadelphia (SBSE Host, Brooke Harrington), and the joint International Conference in 2004, tentatively scheduled for Dublin, Ireland—should be able to share a decent pint or two there! Hey, I might even buy you one!}

—Terri Meyer Boake

Letters [continued from p.8]

about the value of our resources in an educational setting:

a) Students would benefit from their architecture school library having a current subscription to EBN, and a copy of our other resources (EBN Archive, Green Building Advisor, and Green Spec).

b) Professors would benefit from having their own subscription to EBN as background material in preparation for courses and for their continued learning. It would help them stay abreast of cutting edge design and building strategies, products, and issues.

c) The EBN Archive CD is an excellent resource for professors and students since it is a searchable compendium of all EBN issues.

d) The Green Building Advisor is an excellent tool for students in design studios and is helpful for professors, not so much because it has earth shattering strategies, but because it provides a comprehensive checklist and an organized system within which to explore sustainable strategies.

We currently have special pricing for full-time students—50% discount on all resources. And I have continued to offer professors free review copies of our resources in exchange for filling out a questionnaire.

—Jerelyn Wilson, Building Green

[Thanks for the copies of the EBN Archive CD that we handed out at the retreat! I know that a lot of SBSEers value EBN’s insightful, independent reporting on environmental issues in building and design.—ed.]

A CSA Technology Keynote

Continuing a tradition established at the A CSA Technology Conference in M ontréal, SBSE is delighted to sponsor a keynote speaker that we selected, David Miller of Miller–Hull Architects, Seattle. Miller is thrilled at the invitation to speak at the 2003 A CSA Technology Conference in Portland, OR, on October 10–13. [The firm has done a lot of notable design work (such as the Patagonia Service Center in Reno) that celebrates sustainability. See <http://www.millerhull.com>—ed.]

—Alison Kwok
On The Web

Equipment Info
The Global Spec's "product finder" <http://www.globalspec.com/> is an excellent resource when it comes to selecting equipment. It provides a wide selection of metering devices with a broad price range, includes performance information, and has links to the manufacturers' web sites.

—Alfredo Fernandez–Gonzalez

Buildings/Cities Database
I have been e-mailing Meredith L. Clausen about the Buildings/Cities database <http://content.lib.washington.edu/cities>. It even has a Java search tool. Have a peek.

—Leonard Bachman

High-Performance Buildings Database
On May 1, the Department of Energy inaugurated a public, web-based database for cataloging and publishing information about high-performance building projects <http://www.eren.doe.gov/buildings/highperformance/case_studies/>. Highlighting innovative buildings in such fields as energy efficiency, materials use, and water conservation, the database is intended to become the clearinghouse for information on sustainable building design. The web database can store and display information on projects of all sizes, ranging from campuses and neighborhoods to homes and even commercial interiors. A wide range of search options are available, allowing users to locate projects of interest by location, building type, size, keyword, and many other parameters.

Projects can be viewed either in overview alone, or (where data is available) with up to 11 additional screens containing details on the design process, financing, green performance, lessons learned, and other topics. Initially, 28 projects are available in the database—not another 40 are currently under review prior to publication. Users can also submit information about their own high-performance buildings. The database was developed by the Department of Energy working with the National Renewable Energy Laboratory, Building Green, Rocky Mountain Institute, and Design Harmony. The database can also be accessed from DOE's High Performance Buildings web site <http://www.highperformancebuildings.gov>.

—Dru Crawley

Fertile Attractions

Student Volunteers Needed for GBC2002
I'm seeking SBSE assistance in identifying architecture student volunteers for the U.S. Green Building Conference <http://www.usgbc.org/> to be held in Austin, TX, Nov 13–15, 2002. Student volunteers will be given free admission to the conference (conference registration is $400 for design professionals) in exchange for serving as hosts and tour guides.

Send me the names and contact information of students who would like to be part of this exciting national conference. We are working on a plan to have visiting volunteer students stay with UT Austin architecture students during the conference. We need 60–100 volunteers. Contact Michael Garrison, Associate Professor, School of Architecture, University of Texas at Austin, phone 512.471.0185, fax 512.471.0716, <mgarrison@mail.utexas.edu>.

—Michael Garrison

Call for Case Study Buildings
Researchers at Lawrence Berkeley National Laboratory are seeking buildings to include in a study of low-energy cooling, sponsored by the California Energy Commission. There are two parts to the project:

1. We will perform case studies of five buildings that use different types of low energy cooling systems. Four have already been chosen. We are looking for a fifth representative case that uses displacement ventilation. The case studies will document the design intent and analyze the building performance using 12 months of remotely collected energy data. The key findings for each case study will be published in a brochure.

2. We will offer free design assistance using current CEC/PIER-funded design tools for at least three buildings currently in design. This assistance could include cooling system selection and design, development of a building/equipment monitoring plan, and performance assessment by LBNL's Building Technologies Group.

Candidate buildings will include one or more of the following: 1) displacement ventilation, 2) natural ventilation, 3) radiant cooling using slabs or panels (air- or water-coupled), 4) direct and/or indirect evaporative cooling, or 5) water-side "free" cooling.

Please contact Judy Jennings, 510.486.5154, <djennings@lbl.gov>, or Philip Haves, 510.486.6512, <phaves@lbl.gov> with any suggestions you may have for candidate buildings.

—Judy Jennings

ANZAscA Conference
The Australia and New Zealand Architectural Science Association (ANZAscA) Conference this year will be held at the School of Architecture & Building, Deakin University, Geelong, Victoria, Australia, on November 1–4, 2002. The conference theme is "The Modern Practice of Architectural Science: From Pedagogy to Andragogy?" [That's adult learning, not androgeny. -ed.] (The 200-word abstracts were due on June 3, 2002.) For more information visit <http://www.ab.deakin.edu.au/online/anzasca2002/>.

—Veronica Soebarto

Comfort and Energy Performance in Buildings
The Third International Conference on Comfort and Energy Performance in Buildings, COTEDI III, will be held in Curitiba, Brazil, Oct 22–24, 2003. This conference, started as a national conference in Venezuela in 1998, has attracted many authors worldwide. The dates are close to PLEA 2003 in Chile, which might prove convenient for logistics. The web site is <http://ilee01.labeee.ufsc.br/encac-cotedi/>. Abstracts are due Nov 11, and even though not stated on the web site, papers are accepted in English.

—Pablo La Roche

Call for Book Chapters—Sustainable Architecture & Urbanism
The editors seek contributions to a compendium book, Critical Investigation of Sustainable Architecture Cases from the European Union and North America. Twelve essays that analyze conditions on both continents will be selected. It is the editors’ goal to assemble and preface these studies in a manner that will emphasize the cultural and historical context of technological... continued next page
Fertile Attractions [continued]

cal change. Contributors are encouraged to employ empirical evidence drawn from case studies and to theorize the cultural variables at play.

One-page abstracts by North American authors should be mailed no later than August 15, 2002, to Steven Moore; Center for Sustainable Development; School of Architecture; University of Texas; Austin, TX 78712; or electronically to <samooore@mail.utexas.edu>.

- Steven Moore

Building Energy Tools

A lot of new information about Building Energy Tools.

1. **Building Energy Analysis Tools Survey.** We are conducting a web-based survey of energy simulation tool users to find out how much energy simulation is being used and what features users think are most important for near-and long-term development. Please visit [http://SimulationResearch.lbl.gov/](http://SimulationResearch.lbl.gov/) then click on “Survey” in the left menu. The survey takes only a few minutes to complete, and your responses will influence future program enhancements. Your responses are completely confidential.

2. **Version 1.0.1 EnergyPlus Now Available.** A new version of our newest building energy simulation program, EnergyPlus, was released in late April and is available for download from the EnergyPlus web site [http://www.EnergyPlus.gov](http://www.EnergyPlus.gov). Version 1.0.1 contains many new features including: extensive end-use meters, auto-sizing of system components and equipment, Trombe wall, photovoltaic calculations (link to TRNSYS), new window-related features (blinds, controls, data input from Window 5, interior window solar radiation, movable slats, mixtures of gases, triangular windows), many new input file examples and HVAC system templates, continuous extensive testing, movable transparent wall insulation, and many more!

3. **Weather Data for 550 Locations Worldwide Available for EnergyPlus.** The EnergyPlus web site now also includes weather data for more than 550 locations around the world—more than 300 in North America and 200 in 70 other countries. Check out the list of available weather files at [http://www.eren doe.gov/buildings/energy tools/energyplus/energyplus weatherdata.html](http://www.eren doe.gov/buildings/energy tools/energyplus/energyplus weatherdata.html).

4. **Progress on User Interfaces for EnergyPlus.** The most asked questions are “Where is the interface?” and “When will commercial interfaces be available?” We are pleased to announce that we expect the first interface to be available later this summer. Also tools to make using EnergyPlus easier—although it’s not a full user-friendly interface—are now available. Check out these two web sites for more information [http://www.deringergroup.com/Software/EPlusTools.htm](http://www.deringergroup.com/Software/EPlusTools.htm) and [http://www.tse inc.net/epi.htm](http://www.tse inc.net/epi.htm). We will also announce the availability of user interfaces and tools as they become available on the EnergyPlus web site. Note that at least five other organizations have indicated that they plan to develop user interfaces over the next year or so.

- Don C. Rawley

Green Building Guidelines

Over the past two years a number of builders have worked on a committee to develop a comprehensive guidebook titled, **Green Building Guidelines** Meeting the demand for low-energy, resource-efficient homes, to help home builders and other home building professionals design “greener,” more energy- and resource-efficient homes.

We are eager to get the word out on this publication, which we believe is a valuable and informative tool for those just learning about “green” home design. In each chapter of our guidelines there are many valuable design and construction tips for more experienced green builders, not to mention numerous references for those seeking truly detailed information on a topic. As part of this effort, we would be grateful if you would let your members, business partners, and associates know about the guidelines.


- Anja Kovac

Student Design Competition Results

2002 Acoustical Society of America Competition

The project involved the preparation of schematic design for an opera performance hall as part of a college performing arts center. This year’s competition included 10 posters submitted from 5 different schools.

**First Honors:** Cash prize of $1,000 was awarded to William Chu and Dana Smith, Rensselaer Polytechnic Institute (advisors: Chris Jaffe, Yasushi Shimizu, and Rendell Torres).

**Four Commendations:** Cash prizes of $500 were given to the following groups: Bridget Bednarzick, University of Florida (advisor: Gary Siebein); Phyllis H. Anderson, University of Florida (advisor: Gary Siebein); Kevin Kane and Iraklis Lampropoulos, Rensselaer Polytechnic Institute (advisors: Chris Jaffe, Yasushi Shimizu, and Rendell Torres); and Rob Lee and Mike O’Iva, University of Kansas (advisor: Bob Coffeen). Details at [http://www ae.unomaha.edu/lwang/asa2002.htm](http://www ae.unomaha.edu/lwang/asa2002.htm).

2002 Leading Edge Competition

Painting the Urban Fabric: A Sustainable Urban Elementry Art School

**Competition 1** (4-year schools)

**First Place:** Brian Winterscheidt and M. Cullen M. C. Ann. Oklahoma State University (advisor John Womack). **Second Place:** Stephanie Clarkson, J. Moyer, Morgan Barry, and LaiaKinnunen, University of Idaho (advisor Anne M. ashall). **Cash Prize of $1,000 was awarded to William Chu and Dana Smith.**

**Competition 2** (4-year schools)

**First Place:** Brian Winterscheidt and M. Cullen M. C. Ann. Oklahoma State University (advisor John Womack). **Second Place:** Stephanie Clarkson, J. Moyer, Morgan Barry, and LaiaKinnunen, University of Idaho (advisor Anne M. ashall). **Cash Prize of $1,000 was awarded to William Chu and Dana Smith.**

**Competition 3** (2-year schools)

**First Place:** Brian Winterscheidt and M. Cullen M. C. Ann. Oklahoma State University (advisor John Womack). **Second Place:** Stephanie Clarkson, J. Moyer, Morgan Barry, and LaiaKinnunen, University of Idaho (advisor Anne M. ashall). **Cash Prize of $1,000 was awarded to William Chu and Dana Smith.**

For more competition details see [http://www.leadingedgecompetition.org/](http://www.leadingedgecompetition.org/).

- George Cope
G.Z. Brown, John Reynolds, Tisha Egashira (eds. ed.), Sandra Mallory, Bruce Haglund, Jim Wasley, and Alison Kwok (along with Cris Benton and Walter Grondzik) gather in the Moby Dick parlor to strategize.

As well as planning for the future, each attendee made a commitment to initiate or work on the following projects. You are invited to contact them to offer suggestions or help. Brown will serve as 2004 SBSE Anniversary Retreat logistics coordinator. Reynolds will help export SBSE's success to structures and building construction faculty. Wasley will work on contributions for the 2002 SBSE retreat; help support individual charges; document grants, writing, and research through the list serve to uncover commodities heretofore unthought of. Benton will help with the web site and a list of funding agencies and schools funded. Haglund will distribute the Wells checklist in a variety of languages including French, Russian, English; work on the SBSE history project—retreats, officers, membership growth (number of women, how long teaching, number of schools represented). Grondzik will chip away at NAAB accreditation criteria and try to benchmark sustainability at architecture schools (Wasley will help). Mallory will work to infiltrate U.S. Green Buildings Council. Kwok will work on 2004 retreat logistics and content with Charlie; help connect SBSE and ASHRAE; and work on an SBSE exhibit for the National Building Museum.

—Alison Kwok

SBSE News

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