MAINE COAST HOSTS SBSE ANNUAL MEETING


NOT ON THE ROCKS

The society is in sound fiscal shape with $15,173.26 in savings and $227.92 in checking as of April 30. Through the first five months of 1999 there were 53 continuing members and 14 new members. Attendees requested an updated print version of the SBSE directory.

SLIDE ARCHIVES

Alison reported that the archive committee met at the Green Building Challenge to develop criteria for selecting slides for quality, copyright compliance, and cataloguing them. Their goal is to develop Photo CD masters of the viable slides. SBSEers will be able to purchase copies of the slides on CD.

SBSE WEBSITE UPDATE

Walter reported that our site needs more resources, such as syllabi and teaching materials, to increase its value. He’ll post a call for resources on the list server. Also, only 50 members are listed in the online directory. Contact Walter <gzik@polaris.net> if you want to be added. He’s posting the usual info and members’ website URLs.

THE ACADEMY

According to Murray, since the latest FIPSE grant was rejected, the Academy genesis is on hold. Nonetheless, John and Murray will present an ACSA paper outlining the Academy goals. In related arenas, Ball State is developing a new graduate school on the web and Ambrose Spencer <BrosE@Yahoo.com> seeks models for creating a sustainability academy where students can take courses at multiple schools.

SBSE NEWS Summer 1999
LETTERS TO THE EDITOR

It is with both remorse and great excitement that after twelve years I will be leaving the folds of academia. The lessons I learned (and perhaps a bit of eco-indoctrination) while at the University of Oregon changed the way I thought about and taught architecture. My year in Hong Kong opened my eyes to an opposing sense of reality and another set of “truths and meanings.” A fast-paced world in which anything was possible, probable, and most likely already tried once or twice. MIT has been an indoctrination into the East Coast architectural “scene” and mind-opening purveyor of “all things digital” that has lasted two-and-a-half long years.

In September I will be schlepping my family to Europe where I will become the Co-Director of Research and Development for the Ove Arup Partnership in London. I anticipate this thrilling opportunity to work with some of the best in the business. Part of my mission will be to interface with SBSE to know who is doing what fascinating research work that would be of interest to Arup, and to let you all know what research projects and issues are, and will be, of interest to the firm.

I have identified five research issues that might be of mutual interest:

1. World Wide Work
2. Advanced Building Skins
3. Performance Simulation
4. Energy Efficiency and Sustainability
5. Futures

Did you know the Falk house is up for auction later this month? It’s on 100+ beautiful acres, and I’m told the whole thing could go for $100k!! The house was on the market for years, but no one wanted it. Locals call it the “white elephant,” and consider it a joke. I don’t know about vacationers, but that general style seems to have fallen into disfavor in recent years.

I found the house to be visually fascinating as a pure abstraction, although more so when viewed from the outside than from within. The interior was not finished to Eisenmann’s specifications (I believe the Falks got nervous about having tile floors or some such), so it’s possible the house never achieved the full effect Eisenmann had in mind. The first floor gives way to a couple of small patios through sliding glass doors, but I never really got the sense that space flowed from inside to outside the way you might expect. It sits on a small, barren hillside that’s not very inviting. So, despite all the glass, you’re really either inside looking out, or outside looking in. Perhaps, if the flooring design had continued from inside to outside, the integration would have been more successful.

I recently saw something to the effect that the exterior is supposed to imitate the surrounding trees, but that’s ridiculous since there aren’t any within 100 yards of the house! To the contrary, the house’s exposed setting makes it stand out obtrusively from a great distance. It is true, however, that the façade of the house is broken up sufficiently not to present a blank wall from most perspectives; perhaps that is its “organic” quality.

Ultimately, one lives in a house, rather than merely admiring its lines, correct? Well, from that standpoint the house is a disaster. It shares with many other houses of that description the remarkable ability to make the worst possible use of space (inevitable when function follows form), but it goes even further by being downright dangerous to inhabit.

The roof has a number of skylights, and there are light wells beneath, many to let the light filter down to the first floor. The wells are arranged beside stairways and narrow walkways, where a misstep could lead to doom. At the time, the Falks had two young children, so they had gratings inserted into the wells.

On the second floor, there are a number of floor-to-ceiling casement windows. When a window is open, a child could easily fall through the aperture to the patio below. Also, the windows are much too large to be operated with a crank; you must climb a ladder from the outside to push them tightly closed.

The house has two, centralized light switch panels that operate relays in the basement, I have no idea why. If you’re reading in the dining room and it starts to get dark, you have to walk across the entire ground floor to the light panel and return. More seriously, if you are sleeping in the master bedroom and need to use the bathroom, you have to carry a flashlight to find your way along the stairways and walkways because there are no light switches along the route!

The house has sliding glass doors and one entry door, none beneath an eave or porch. When the temperature falls below freezing, the rails in the sliding glass doors clog with ice, rendering the doors inoperable. When it gets really cold, the front door freezes as well. I used to open the front door by putting my foot on the wall and pulling. One day I pulled the handle off and had to call a neighbor to beat the door in!

Vermont has very cold, dry winters. With a forced-air gas furnace, if you don’t humidify the air, furniture will crack and your nose will bleed. In that house, if you did humidify, water dripped in sheets down the windows, collected on the sills, and molded. Also, the GE silicone (?) skin didn’t breathe, so vapor condensed in the walls; the plywood and insulation were actually damp to the touch until we drilled dozens of vents into the walls, which looked like hell.

The floor plan allowed for little privacy outside the bathrooms; this works less well for some inhabitants than others. It certainly didn’t work for the Falks and their children who weren’t used to living communally. The master bedroom has direct access, but the second bedroom can only be reached by walking through the third one. Acoustically, the three bedrooms were nearly one.

SBSE News is published quarterly by the Society of Building Science Educators, a not-for-profit corporation. Material for publication should be submitted to Bruce Haglund, Editor; Department of Architecture; University of Idaho; Moscow, ID 83844–2451; phone 208–885–6781, fax 208–885–9428; e-mail bhaglund@uidaho.edu; before the first of March, June, September, or December. Membership and mailing list inquiries should be directed to Terri Meyer Boake, Secretary/Treasurer; School of Architecture; University of Waterloo; Waterloo, Ontario; Canada N2L 3G1; phone 519–885–1211 x6647; fax 519–746–0512; e-mail <tboake@cousteau.uwaterloo.ca>. Join the SBSE list server by sending subscribe sbse to <majordomo@uidaho.edu>. Visit our home page <http://www.polaris.net/~sbse/web/>.

• continued next page
MAINE COAST HOSTS SBSE (CONTINUED)
RELATIONSHIPS WITH OTHER ORGANIZATIONS

SBSE has participated in sponsorship of ASES and ACSA conferences, but has not attained much visibility. Currently Jennifer Rennick and Margot serve as chairs of ASES’s sustainability and building divisions, respectively. SBSE will sponsor Ray Cole as a plenary speaker at the ACSA Technology Conference. Murray suggested that SBSE give an award at next year’s ASES awards banquet to raise visibility. Walter organized an SBSE symposium at the last EDRA conference. Bruce is a member of the AIA/CES providers council and can serve as a conduit for SBSE’s continuing education concerns. Next year Mike will be the passive division technical chair for ASES2000.

A RESEARCH FUNDING PROPOSAL

Harold put forward the idea to fund research into topics related to his interest in skytherm technology. An annual award of $100,000 could be split among four researchers at universities nation- or world-wide through the auspices of his family foundation and Cal Poly SLO. Stay tuned for more information.

—Sandra Mallory

LETTERS (CONTINUED)

I cannot tell you what it has meant to me to have been part of SBSE. I anticipate maintaining strong academic alliances with you and I look forward to keeping in touch over the coming years. We will be renting a house that will be large enough to accommodate guests and expect you to give us a ring when you come to London!

—Chris Luebkeman, MIT

I am on a one-year IPA to the U.S. EPA ENERGY STAR® Homes Program as a Senior Researcher. IPA is inside-the-beltway-speak for an assignment from a university (NJIT) to a government agency. The ENERGY STAR Homes Program enters voluntary partnerships with home builders who increase profits by constructing residences that are 30% more energy-efficient than a home based on the Model Energy Code. Increasing energy efficiency in homes reduces air pollution and assures home owners lower utility bills and increased resale value, <www.energystar.gov/homes>.

As part of the assignment, I am EPA’s representative to the Partnership for Advancing Technology in Housing (PATH) <http://www.pathnew.org> or <bales.erv@epa.gov>—a presidential initiative that brings together government agencies and industry to develop, demonstrate, and deploy housing technologies, designs, and practices that can significantly improve the quality, durability, energy-efficiency, environmental performance, and affordability of new and existing houses (How about that!).

As you already know, your newsletter is the greatest. [Aw shucks, gosh—ed.]

—Erv Bales, U.S. EPA

—Gary Moresky
Daylighting Deleted by ASHRAE?

Thanks for your overwhelming responses to my urgent broadcast about the proposed deletion of the daylighting section from ASHRAE 90.1R. The cc’s I received showed your deep concern. I think ASHRAE will have to respond positively. If you wrote ASHRAE, you should have received a response form from them and may be wondering what it all means. Let me try to outline it.

It seems that the 90.1R committee is under pressure from the ASHRAE board to release the new standard by June (otherwise the board has threatened to kill the entire 90.1R document). The committee received considerable comments (thanks to so many of you) concerning the deletion of the daylighting section and realized their position was indefensible. Thus, they are proposing a compromise. Accept the Third Public Review Draft (with the daylighting section deleted) and as soon as 90.1R is approved by the board it will be placed in continuous maintenance and the daylighting section will be re-inserted as an addendum item which must undergo public review. Thus it could take up to a year before the daylighting section is re-inserted. The 90.1R committee’s proposal is probably the best alternative at this late date.

The other option is for the ASHRAE board to kill 90.1R and place 90.1-1989 in continuous maintenance and gradually upgrade that document via the addendum process. Last year the ASHRAE board did exactly the same with the ventilation standard (62-1989) when that revision ran into trouble. There are several on the ASHRAE board who support this option and who believe that the 90.1R committee’s mismanagement of the review process has placed 90.1R in jeopardy of not receiving ANSI approval. This option would be good from a daylighting standpoint (the daylighting section in 90.1-1989 is strong) but will delay the many energy improvements that are in the rest of 90.1R.

Thus, I feel I’m stuck between a rock and a hard place. On the response form I will vote that my concerns were ‘resolved’ but that I will be closely following the 90.1R committee’s actions to ensure that the re-insertion of the daylighting section moves quickly through the addendum process. I will remind the 90.1R committee that this whole problem suggests that there were procedural failures during the Second Public Review, which might open 90.1R to a challenge at the ANSI level. I hate to play hardball, but 90.1R caved in once before, and we have to show them that we can play the same game as BOMA.

I will keep everyone informed as to how ASHRAE responds to all these issues. Their next meeting is June 19–23 in Seattle. Thanks again for being so helpful on all this ASHRAE business; I know how bureaucratic it all seems. I am looking forward to seeing you in Portland and Tadoussac.

-Harvey Bryan

Daylighting Nirvana

“A Celebration of Daylighting at the Mt. Angel Library,” sponsored by Portland General Electric, took place on a sunny and warm May 22 at Alvar Aalto’s daylighted library. The forum featured presentations by several SBSEers and others discussing the opportunities and challenges of designing with daylighting in the Pacific Northwest. Charlie Brown (Oregon) started the day with “The Window, the Wall, the Garden, and the Room,” delighting us with images of windows, art, view, passage, refuge, hazards, and psychological needs. Nathan Good (PGE) provided background information and a “tour” of the library, based on his experience with the library as a Vital Signs case study <http://www-archfp.ced.berkeley.edu/vitalsigns/index.html>. Kent Duffy of the SRG Partnership in Portland provided examples of recent projects where rules-of-thumb for siting, form, and envelope played a large role in daylight design. Alison Kwok (Oregon) reviewed three student-generated case studies: St. Ignatius Chapel (guided by Sandy Stannard and Bruce Heglund, Idaho), UBC Museum of Anthropology (guided by Marietta Millet, Washington), and the Emerald Peoples’ Utility District Building (guided by Alison Kwok, Oregon). Barbara Erwine (Seattle Lighting Lab) discussed links between occupant productivity and daylighting. The day included break-out sessions, roof tours, mechanical space tours, a hands-on main floor/reading area illumination “sweep” with the lights on and off, and a gala reception. The event concluded with a serendipitous lecture from a Benedictine monk who averred that in order to understand light and reality, you must understand darkness. [Darth Tuck?–ed.]

-Alison Kwok
BUILDING-INTEGRATED PHOTOVOLTAIC SYSTEM

A 2.4-kW photovoltaic system was installed on the roof of the Art & Architecture Building at the University of Michigan. The objectives of this installation were to demonstrate the technology, study all aspects of roof integration, and evaluate the use of generated electricity in the building. Other potential implications of this technology, especially with regard to its installation on existing structures and interface with the local utility grid were researched.

This study reports on the results of the efficiency of this particular PV system. The daylight and solar availability measurements along with the power output of the system under Michigan weather conditions are available in a database. The efficiency of the system has been determined and the measurements were made in accordance with recommended practice of daylight/solar measurement, data quality control, processing and dissemination by International Commission on Illumination (CIE) and the World Meteorological Organization (WMO) as part of the International Daylighting Measurement Year (IDMY) program. For more information contact <moji@umich.edu>.


EXCELLENCE IN ARCHITECTURAL GLASS DESIGN

One of the graduate students in the University of Texas–Austin’s design with climate program, Elvin Ferrer, has won second place in the 1999 National Student Awards for excellence in Architectural Glass Design, sponsored by the National Glass Association (NGA). The NGA celebrates outstanding design in architectural glass and fenestration through these student awards. The program recognizes excellence in design using flat glass in the areas of exterior and interior architectural glazing and specialty glazing. Both Elvin and our school will receive a $1200 award each and a profile in Glass Magazine.

Elvin’s entry, “the window wall,” explored the design of the vertical surface and the requirement for exterior glazing to provide both sun shading and daylighting.

INTEGRATED BUILDINGS SYSTEMS COURSE

Last fall I completed a course on integrated buildings systems at MIT which was really the result of my interaction with SBSE and the lessons I learned from all of you. The course incorporated Vital Signs concepts in a design studio-like environment. I loved teaching the class, and the students learned way too much for their own good—they continued to want to use the measurement tools in the spring for their other design studios, which was great, since it forced some of these studio “teachers” to learn a bit about how buildings really work and the simulation tools available to model them. The course website can be found at <http://architecture.mit.edu/class/4.455/www/index.html>. If it is not available, send me a note and I will send you a CD with the course on it.

Q: How many SBSEers doe it take to identify a light bulb?
A: Alison Kwok and Walter Grondzik aid two students at a HOPES workshop in their quest for F40 T-12 CW.
VITAL SIGNS NEWS

The Vital Signs project has been awarded a small ($20K) DOE grant to continue work on the website. A larger DOE grant proposal is under consideration.

This year Vital Signs Toolkits have been awarded to eight schools—Carleton University (Lucie Fontein); Kent State University (Richard Murphy); Universidad de Francisco Marroquien, Guatemala; University of California (Ed Arens); University of Cincinnati (David Lee Smith); University of Idaho (Bruce Haglund); University of Oregon (Alison Kwok); University of Washington (Marietta Millet). —Cris Benton

SEEKING PH.D. STUDENTS

The University of Calgary is seeking doctoral students in architecture. Thus far we only have one student, from Mexico. Candidates must have a master's degree and a grade point average of 3.5. A 2–3 page dissertation proposal and a potential supervisory committee roster must be submitted along with the usual references and transcripts. Our faculty strength is in the area of sustainability, renewable energies, indoor air quality, building science, and theory. See <http://www.ucalgary.ca/evds>. —Tang Lee

CALL FOR PAPERS

PLEA 2000—Architecture, City, Environment—will be held in Cambridge, England, July 2–5, 2000. Accommodation will be at historic King’s College. Papers are invited on low-energy urban planning and design; modelling the urban environment; comfort in outdoor spaces; health and the urban environment; design tools; case study projects; renewables; education; reuse and refurbishment. Deadline for abstracts Sep. 1; Notification of acceptances Oct. 1; Deadline for full papers Jan. 15; Deadline for poster papers Mar. 1; Confirmation of program Apr. 1.

Requests for further information and/or submission of abstracts: Ms. Lynda Bryers; University of Cambridge; Programme for Industry; 1 Trumpington Street, Cambridge, CB2 1QA, United Kingdom; fax +44(0)–1223–301–122; <cpi@hermes.cam.ac.uk>; <http://www.cam.ac.uk/CamUniv/CPI/>.

—Jeff Cook and Don Watson

SBSE TADOUSSAC RETREAT SCHEDULE

Monday, June 28
2:00p Ferry arrives at Tadoussac
8:30p Evening program: Intros, logistics, and cheers (wine, beer, sparkling water, plus something to nibble on)
Opening remarks: Discussion leaders

Tuesday, June 29
8:30a–10:00a Measuring Sustainability (Haglund)
10:30a–Noon Measuring Teaching Effectiveness (Brown)
Breakout Group I (Brown and DeKay)
Breakout Group II (Clark and LaVine)
Lunch Lucie's recommendation
2:00p Follow-up sessions: Measuring Sustainability Synthesis on Teaching Effectiveness Special topics
4:00p Whale-Watching Cruise (3 hours)
6:00p–8:30p Dinner
8:30p Evening program: Informal gatherings around Tadoussac

Wednesday, June 30
8:30a–10:00a Measuring Technology/Design Integration (Angevine)
10:30a–Noon Measuring the Concise Curriculum (Boake)
Lunch Lucie's recommendation
2:00p Follow-up sessions: Measuring Technology/Design Integration Measuring the Concise Curriculum Special topics Measuring local geography—dunes, Saguenay Fjord, St. Lawrence River
8:30p Evening program: Measuring the Path towards Teaching Excellence (Reynolds and You)

Thursday, July 1
8:30a–10:00a Special topics
Lunch and farewells
2:00p Ferry departs for Québec City (arrives @ 6:30p)

RETREAT PARTICIPANTS

Eric Angevine, G. Z. Brown (w/Sue), Harvey Bryan, Paul Clark, Mark Dekay, Stephen Dent, Lucie Fontein, Walter T. Grondzik, Bruce Haglund, Alison Kwok, Lance LaVine, Sandra Mallory, Margot McDonald, Terri Meyer Boake (w/sister and baby Elanne), Murray Milne, John Reynolds, Mike Utzinger, and Jim Wasley will be at Tadoussac.

—Paul Clark

Join Alison Kwok and John Reynolds (sighted at ASES) for more café dining at Tadoussac.
BOXCAR PRO 4.0

Onset Computer has solved all your HOBO blues for about $80. Remember trying to go to Excel to plot data from multiple HOBOs or data with multiple parameters? Hard to do, eh? The new BoxCar Pro 4.0 software will allow you to compare multiple parameters on one graph, append data from successive deployments on the same graph, overlay data from different deployments, and set axis ranges. All this plus much more! The release of BoxCar Pro 4.0 has been delayed until at least August 1. Contact Onset at 1-800-LOGGERS or <http://www.onsetcomp.com> for more info.

GBC ’98 CD

The Green Building Challenge ’98 Conference Proceedings (and more!) is finally available on CD. The order form can be conveniently downloaded from the GBC website, <http://www.greenbuilding.ca>. Send in your credit card info or a check for $100 CAD, and the CD is yours. For those who attended the conference—you should be receiving your “free” copy in the mail. We will also be adding a collection of GBC poster slides (100+) to the SBSE Slide Archive. These were produced (with permission) earlier this year. SBSE archive access procedures are still being worked out by an SBSE subcommittee. Margot McDonald can answer your questions.

ENERGY DESIGN RESOURCES

Energy Design Resources—a text with a CD containing three software tools, a set of design briefs (CK size 40 long)—ed., and several case studies—is available for free from Southern California Edison [so it’s SoCal-centric—ed.]. Contact Shelly Baumgardner <BAUMGASL@sce.com>. Software includes eQUEST (gives energy impacts of design options with only preliminary info—it has an integrated DOE-2.2 simulationengine!), eVALUator (gives financial consequences of design options), and SkyCalc (helps identify optimum sky light configurations).

LAMINATED GLASS UNIVERSITY

Imagine a free Laminated Glass University in a three-ring binder! It includes lots of things you’d like to know about laminated glass (from acoustic to structural, to thermal properties), a glass sample, slides and descriptions of case study buildings, and a t-shirt (XL, all-cotton). Contact Sheri Heftel, 800–230–4527 or visit the North American Laminated Glass Information Center website <http://lgic.glass-info.com>.

GREEN BUILDING RATING SYSTEM

Look to the U.S. Green Building Council website, <http://usgbc.org>, to download the pilot version of the LEED Green Building Rating System. The system, in PDF format, includes scoring checklists for planning sustainable sites, improving energy efficiency, conserving materials and resources, enhancing indoor environmental quality, safeguarding water, and improving the design/build process.

PHOTOVOLTAIC DESIGN SOFTWARE AND MORE

PV-DesignPro software includes methods to size photovoltaic arrays and domestic solar hot water systems as well as climate data for cities worldwide. The software is intensely graphic and extremely user-friendly. It is well-suited for student use. Take a look at <http://www.mauisolarsoftware.com> for current information. Contact Mike Pelosi <mpelosi@maui.net> to discuss educational discounts.

GREEN BUILDING ADVISOR

The interactive Green Building Advisor CD can be purchased from CREST in bulk or on a site license basis by educational institutions. Academic bulk rates are 1–4 copies for $99 each, 5–14 for $94, 15–49 for $89, and 50 or more for $79; while academic site licenses are $99 for the first copy plus $39 for each additional copy. [Copies have no printed manuals—no big deal for this extremely user-friendly program. Nonetheless we’re negotiating with EBN for a deeper student discount—ed.] To order contact CREST Technical Support <support@crest.org>.

—Bruce Haglund

EVENTS

SOLAR IS RENEWABLE

The ISES 1999 Solar World Congress, Solar Is Renewable, will be held in Jerusalem, July 4–9, 1999. For info check out the congress website <http://tx.technion.ac.il/~meryzse/isess99.html>.

NORTH SUN ’99


PASSIVE AND LOW ENERGY

The 16th International Conference on Passive and Low Energy Architecture will be centered on Brisbane, Australia, September 18–26, 1999. For info contact Conference Secretariat Sally Brown; ICTE Conferences; The University of Queensland; Brisbane, Australia 4072; phone 61–7–3365–6360; fax 61–7–3365–7099; <sally.brown@mailbox.uq.edu.au>; <http://www.architect.uq.edu.au/PLEA99>.

GREEN CAMPUS III

Greening of the Campus III: Theory and Reality will be held September 30–October 2, 1999, at Ball State University, Muncie, Indiana. For info see <http://www.bsu.edu/greening/>.

MAINSTREAMING GREEN

Mainstreaming Green: Sustainable Design for Buildings and Communities will be held October 14–17, 1999, in Chattanooga, Tennessee, organized by AIA COTE and the U.S. Green Building Council. For info contact Muscoe Martin <mbm@maxmanpartners.com>.

Margot McDonald facilitates her final SBSE annual meeting as president.
MAINE COAST HOSTS SBSE ANNUAL MEETING

SBSEers circle up for the annual meeting under the chandelier in an ASES-provided meeting room. As usual, there is not much solar about this room (HVAC cave)!

FALL ISSUE SUBMITTAL DEADLINE—SEPTEMBER 1