Winter solstice greetings from the SBSE members gathered on the Green Gulch deck on the summer solstice.

1995 Summer Retreat Funding Secured

The Energy Foundation has committed $15,000 to next summer’s retreat as a part of the Vital Signs project. The co-principal investigators for the project, Cris Benton and Gail Brager, will be developing the agenda and logistics for a faculty/student workshop.

The primary purpose of the faculty/student workshop is to provide an introduction to the Vital Signs resource packages and toolkits and to demonstrate formats for preparing Vital Signs building workups for distribution. To be most effective, we will target our two most receptive audiences: 1) faculty who are already committed to teaching energy and technology issues and 2) students who are concerned with these issues and who can serve as leaders in generating interest among their peers when they return to school.

For the workshop approximately half the faculty members currently generating resource packages will be presenters. Teams consisting of one faculty member and one student will be selected to represent about fifteen architecture schools. Travel grants will partially support each team with the stipulation that the team’s school supplement the grant with a fixed contribution to confirm its support (modeled after the ACSA Summer Energy & Design Institutes). We will develop procedures and criteria for awarding grants to workshop applicants, with selection criteria clearly delineated in the call for applications. This call will be issued in SBSE News, ACSA News, and by direct mail to architecture department chairs. Applications will be reviewed and selections made by the end of April 1995.

In addition to the faculty/student workshop at the retreat, Vital Signs initiatives including the Fall ‘95 Beta Test Mini-Grants, Spring ‘95 Case Study Mini-Grants, and Fall ‘96 Student Case Study Competition will be discussed. Anticipate the spring SBSE News for details!

—Cris Benton

Daylighting Detail

This month’s best lighting detail is from the top floor gallery of the San Francisco Museum of Contemporary Art designed by Mario Botta. The museum opens to the public on January 19, 1995—a happy coincidence for Vital Signs participants who will meet two blocks from SF MOCA on January 20 and 21.
Letters to the Editor

I'm trying to get this newest, self-published book into more architecture schools; the only way I know to do it is to send out a few copies.

I hope you'll forgive my pushiness.

P.S. New Age magazine has interviewed me for its January issue. I'm not sure that such an appearance will add any weight to the gentle architecture cause.

—Malcolm Wells, Architect, Brewster, MA

[I'm not sure why you chose to send a copy of your book, Infra-Structures, to me, but I certainly appreciate it. By chance or calculation I'm the "right" person. I'm a long-time admirer of your work and outspoken criticism of the profession. I also teach a course that examines environment and infrastructure, challenging students to transcend the conventional. I'll order Infra-Structures as a supporting textbook. I really appreciate its powerful images and terse commentary. Also, I'm the editor of the SBSE News, a quarterly newsletter for university architecture teachers whose interests may be similar to mine—I'll inform them that the book is available from you at Underground Art Gallery, 673 Sackucket Road, P. O. Box 1149, Brewster, MA 02631.

Pushiness appreciated: keep up the good work! Thanks.—ed.]

Maybe some Rose Bowl Q&A would be fun for the SBSE News?

"I Smell Roses" is a trendy restaurant in Pasadena, CA, owned by a University of Oregon graduate of our A&AA Leisure Studies & Services program [no joke—ed.], with ambitions of serving environmentally conscious Oregon visitors [mmm—they make a lovely meal—Organic ducks—ed.]. Its dining floor area (excluding kitchen) is 2500 ft².

Go UO Ducks!

—continued page 3

Vital Signs: the Long Term

[Excerpted from the Vital Signs Project Proposal for Renewed Funding.—ed.]

While our proposal focuses on Vital Signs activities over the next two years, we do have a longer view of the project. Our goal is an ongoing, self-sustaining Vital Signs that continues to develop field methods and, in particular, distribute completed building workups. Our strategy is twofold: 1) support, in the short-term, a senior-level faculty consultant to build bridges to possible funding sources and institutions in architectural education; 2) use, over the long-term, SBSE to sustain the Vital Signs Project through ongoing promotion, fundraising, and the development, collection, and dissemination of material.

SBSE is the ideal candidate for the long-term maintenance of the Vital Signs effort. It is an association of over 120 university educators representing 80% of the architecture schools in North America. Its objective is excellence in the teaching of environmental science and building technologies. SBSE members include teachers, authors, administrators, and practitioners sharing an interest in curriculum innovation, development, and dissemination of teaching materials. In addition to the annual SBSE curriculum development retreats, SBSE publishes quarterly newsletters and maintains archives of slide and curriculum materials for distribution to its members.

In many ways, the Vital Signs Project is essentially a product of SBSE. Discussions at an annual SBSE retreat on the pedagogical role of case studies established many of the ideas incorporated in the original Vital Signs proposal. SBSE members play central roles in the current development of resource packages by third-party schools, and serve as members of the technical review committee.

SBSE is the only group whose sole interest is in promoting energy as an educational and research issue within schools of architecture. By representing the majority of faculty that address energy issues in their courses, SBSE is well-positioned to help the Energy Foundation accomplish its goal of promoting the use of Vital Signs curriculum materials.

While SBSE will play an important role in the long-term support of Vital Signs, some short-term activities are necessary to ensure the project's broader success. It will be important to nurture collaborative relationships between SBSE and other influential organizations, such as ACSA and DOE. We believe the best path to this interorganizational networking of Vital Signs would be through a long-standing [ouch! sore back, tired feet—ed.], senior SBSE faculty member capable of speaking to these agencies with confidence about SBSE and its history. This person's agenda would be to serve as an agent for SBSE, in representing and promoting the content of the Vital Signs project while exploring mechanisms for longer-term, ongoing funding. Our sense is that this effort needs to occur over the next two-year period, and that this function is best funded independently, outside the Energy Foundation/UC Berkeley contract.

—Cris Benton

Internet Buzz

I have, as a trial, set up a Mosaic base page for SBSE on our local computer. The address is: http://brick.arch.vuw.ac.nz:85/index.html

Let's see where we go from there!

—Michael Dunn [mike.dunn@vuw.ac.nz]

[I don't have the backbone (a technical term, not self-deprecation) to check this out, but I'd better get it because Cris Benton has also established an SBSE presence on WWW. FYI you can find Cris' stuff at http://www.ece.berkeley.edu/—ed.]
**Book Review**


Heating, ventilation, and air-conditioning (HVAC) design, not unlike structural design, is often seen as a subject many architects and interior designers feel best left to the engineering consultants. As building science educators, it is our goal to incorporate concerns for human comfort and ways to achieve it by natural and mechanical means into the architecture curriculum, particularly in the design process. Popular and excellent references and textbooks, such as _Mechanical and Electrical Equipment for Buildings_ (Stein and Reynolds) and the ASHRAE handbooks, can intimidate students just by the vast amount of information and the weight of the books. Although they are excellent resources for the inquiring student who wants to delve into the field of environmental controls, most students would rather tackle a book the size and complexity of Bobenhausen’s.

William Bobenhausen successfully presents an easily read and understood “primer to the ASHRAE handbooks” (as long as you do not catch one with metric units of measurement) and a textbook well-suited for introductory HVAC courses in architecture and interior design curricula. His writing style is characterized by short sentences with little technical jargon. Occasionally, humorous or slightly cynical remarks add to the reading enjoyment. Chapters are concise and clearly organized. Illustrations and data tables provide simple visual information that extends the written explanations. Freehand drawings are generally well-selected and appropriate, although not quite as catchy as the ones in _How Buildings Work_ (Edward Allen). I found few inconsistencies in the presentation of the material.

The author’s wonderful achievement, however, lies in the actual description of the HVAC systems. Where many introductory environmental control systems books provide only basic discussions of the systems available, Bobenhausen offers the reader simple, but detailed, information on the various systems and guidance in choosing the appropriate one for the application in question. His thorough coverage of the topic can help students, as well as professionals, achieve a high level of understanding and confidence. Although the book focuses on mechanical means for providing occupant comfort, passive design strategies and solar energy applications are integrated into the discussion. A brief introduction of the fundamental strategies for HVAC system controls and simple economic calculations round out this delightful and comprehensive treat.

The only real shortcomings of _Simplified Design of HVAC Systems_ are the omissions of promising new developments for HVAC applications (e.g., hydronic radiant cooling panels in the ceiling plane, which are already in widespread use in Europe and Asia) and the metric (Systeme International-SI) system of measurement. With the upcoming requirement to convert all engineering applications in the United States to the SI system, we cannot afford to leave another generation of students and practitioners in the dark. Many U.S. research institutions already require the use of metric units in all research publications. Without confidence in the use of the international system, new research developments may not find their way into practice as quickly as desired to keep this country competitive with foreign markets. A bibliography guiding interested readers to selected references for further study, as well as full bibliographical references for books and publications mentioned in the text, are other potential assets that I found missing. These suggestions, however, can easily be integrated into an updated version of this otherwise excellent book. Bobenhausen’s _Simplified Design of HVAC Systems_ can be a valuable addition to every building science educator’s personal reference collection and should be considered for classroom use.

—Werner Ostenhaus

**Letters to the Editor [continued]**

Q. With this LCR=25 and mass/glass ratio, what is the range of interior temperatures on a clear January day in Pasadena (LA), assuming an internal gain of 8°F from lights, people, equipment, etc.?

A. 58–69°F (cold duck)
B. 67–84°F (comfy duck)
C. 84–96°F (sweaty duck)
D. 89–101°F (roast duck)

—John Reynolds, University of Oregon

_Was that fun? We all forgive you, John. Rose Boulfer is a localized disease. I picked an easy question. If you read the instructions, you know it has to be D. Everyone send in your 'toughest' exam question so we can create the test from hell—dream the unpassable test._

—EM

I would like to acquaint you and the membership of SBSE with a new teaching manual, _Demonstrating Structural Behavior_, published under a grant from the Graham Foundation. Fuller Moore seems to think it quite useful. It is self-published at little, if any, profit.

I have retired from full-time teaching, but fulfill a role as technical critic in third-year design studio (structures, acoustics, HVAC, and other "practical issues"). I might submit an article to your newsletter about how this arrangement works.

—Richard Kellogg, University of Arkansas

_I hope your foray into the footlights of the letters to the editor column whets your appetite for pursuing more fame in our humble publication. SSERs who are interested in Dick’s book can contact him at School of Architecture, University of Arkansas, Fayetteville, AR 72701, (tel) 501-575-4945, rkellog@comp.uark.edu._
Opportunities

Progressive Architecture plans to publish a feature article next spring on the role of building science and materials education in architecture programs, with special reference to the relationship between design studios and so-called "support" courses. Michael Crosbie solicits your ideas for this article, either by telephone at 203-348-7531 or by fax at 203-348-4023. Contact him as soon as possible, but no later than March 1, 1995.


Architecture Reading Lists and Course Outlines, Vol. 3, a collection from courses taught in architecture curricula, edited by Georgia Bizios, is now available. This volume complements the two volumes published in 1991 and includes courses in architectural design, architectural theory and criticism, environmental issues, human behavior, professional practice, special topics, and urban design history and theory. It is available for $35 from Eno River Press, 115 Stoneridge Drive, Chapel Hill, NC 27514-9737. Fax credit card orders to 919-967-8246. For further information, contact Georgia Bizios, School of Design, North Carolina State University, Raleigh, NC 27695-7701, (tel) 919-515-2205.

Available at your school—Case Studies in Sustainable Design, a video produced by the AIA and excerpted from the AIA 1993 video conference series, Building Connections. Its contents include energy and resource efficiencies, healthy buildings and materials, and sustainable community design. Case studies of the Rocky Mountain Institute, Audubon House, the Greening of Harlem, and Haymount are included. The two-hour video was distributed to all schools of architecture last September through a grant from the W. Alton Jones Foundation.

The European lighting forum, IAEEL Newsletter, is available free of charge to lighting educators worldwide. To join the mailing list, contact Nils Borg, Editor, IAEEL Newsletter, (tel) +46-816-8112, (fax) +46-816-8113, nilsborg@nutek.se.

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Cascadia Lighting

The Cascadia Alliance: Lighting Education Plan is a product of a 1993–1994 planning grant awarded to the architecture departments at the University of British Columbia, the University of Oregon, and the University of Washington by the Nuckols Fund for Lighting Education. The plan, a multi-year effort by each participating school, draws upon the resources of a wide variety of the region's private and public sector organizations in the area of lighting and energy conservation.

The architecture and planning departments of these Pacific Northwest universities formed the Cascadia Alliance to improve the study of the built environment through the emphasis on and quality of building and urban design in the Cascadian region. Simultaneously, Joel Loveland, Marietta Millet, Ray Cole, Virginia Cartwright, G. Z. Brown, Gunilla Finrow, Rob Peña and John Reynolds started work on the Lighting Education Plan. The plan is the first joint effort to effect change in the educational opportunities offered by each school's program, implementing new approaches for teaching and influencing the practice of architectural lighting design.

Recently, these schools have been forced to reduce their allocation of resources to support only the fundamental aspects of their professional programs. There has been little support for advanced academic coursework, so the area's population of architecture students, interns, and practitioners have not been offered a comprehensive education in architectural lighting. Cascadia's collaboration provides a vehicle for leveraging the strength of each school's individual academic programs with the least expenditure of scarce resources. This effort will expand educational opportunities for students, faculty, and practitioners through intercollegiate programs in which members of several university communities exchange information, share their research findings, and teach or learn design innovation.

The four programs of the Lighting Education Plan are:

1. Architectural Lighting Certificate—an outline of courses and research that will culminate in the award of a certificate recognizing comprehensive study in architectural lighting.
2. Summer Lighting Institute—Courses of Light—an intensive, three-week course in architectural lighting for students and practitioners.
3. Student and Faculty Exchanges—students will be able to study for a term at another Cascadia Alliance school, and faculty will have the opportunity to teach, lecture, and conduct research at other alliance schools.
4. Archive of Teaching Resources—a pool of resources available to the member schools (modeled on the SBSE slide and curriculum materials archives).

—Ginger Cartwright

---Continued Page 6---
Sustaining Architectural Research Centers

The Architectural Research Centers Consortium (ARCC) recently examined the key ingredients to successful research centers in schools of architecture. The two-day symposium, Developing and Sustaining Architectural Research Centers, was held November 18-19, 1994, in Washington, D.C. Moderated by Kent Spreckelmeyer of the University of Kansas, the keynote speakers were Russell Leslie, Associate Director of the Lighting Research Center (LRC), Rensselaer Polytechnic Institute; Sandra Rosenbloom, Director of the Drachman Institute for Land and Regional Development Studies, University of Arizona; and Walter Wendler, Dean of the College of Architecture, Texas A&M.

Many schools of architecture are looking to research centers as cash cows for financial stability (which they're not), as curriculum enrichment (which they can be), and as ways to improve our profession and architecture (which they certainly can be). The three keynote speakers used their experiences as case studies.

The LRC has grown from two to thirty full-time faculty and staff and twenty-five graduate students since 1988. It now operates with an annual budget of $3.2 million for research, education, and technology transfer in lighting. Leslie identified these keys to LRC's success:

1. establish a clear mission
2. form links with industry
3. employ multi-disciplinary researchers
4. deliver usable products that support the mission
5. manage the center as a business/academic hybrid
6. serve as a network hub
7. involve researchers in development work
8. develop contracting flexibility
9. offer marketable programs.

Six LRC programs were presented to illustrate the integration of these nine points at the LRC.

The Drachman Institute promotes environmentally sensitive land use and development in the Southwest. Their four-part mission is to:

1. identify emerging questions
2. serve as an unbiased and comprehensive information source
3. provide forums for decision-makers to clarify contentious regulatory issues
4. assist communities in decision-making about their futures.

Rosenbloom recommended building center activities on existing faculty strengths. Unlike the LRC, the priority is on making faculty, rather than staff, hires. The Drachman also emphasizes providing value for the sponsors' money.

Texas A&M classifies research groups into three levels: institutes, centers, and laboratories. Wendler described six of their many research groups emphasizing the importance of multiple centers to balance the influence on the academic program. He believes that close integration of the research and educational programs along with a "knife-edge" focus on what the center does are the ingredients for success and future funding.

Those attending the symposium debated issues facing research centers—is a center a business or part of a university? How can service to the university and profession be balanced with the cost of providing those services? How does the promotion and tenure process support the development of centers—and vice versa—ed.? What is the role of the center in the school of architecture's curriculum? How does design become a legitimate component of research? Positions on these issues ranged widely, but it is clear that in order to succeed, centers must clearly respond to each of these questions in a manner that reflects their own mission and academic context.

—Russ Leslie

SBSE People

☐ The RPI Lighting Research Center's National Lighting Product Information Program and its director, Russ Leslie, received the 1994 Governor's Award for Energy Excellence.

☐ Walter Kroner received a $60,000 RPI Strategic Initiative Funding grant for advanced building envelope research. He plans to survey façade-related building products in the U.S., Europe, and Japan, as well as to catalogue the teaching and research needs and resources at U.S. schools of architecture.

☐ Adam Geoffrey Brager, son of Gail Brager, is at-large (see wanted poster below).

WANTED

ADAM GEOFFREY BRAGER
also known as "Baby Face"

11-18-94

escaped from solitary confinement at 11:55 a.m.

DESCRIPTION:
male -- 7 lbs. 0 oz. -- 201/2 in. -- reddish brown hair

ACCOMPILIES:
Gena and Gail Brager

WARNING:
suspect's diaper may be loaded; approach with extreme caution

Missing Member

? Lisa Heschong no longer works for ADM Associates in Sacramento. Does anyone know her whereabouts?
Opportunities [continued]

The University of Southern California has openings for one permanent and two visiting faculty in technology. Any combination of expertise in building technology, structures, environmental controls, and computers is desirable. There is additional interest in areas of sustainability, healthy buildings, or other current topics. Beginning Fall ’95, the successful applicant would teach required undergraduate courses and advanced graduate seminars. Rank and salary depend on qualifications. Women and minorities are encouraged to apply. Interested candidates should submit a vita and three references to Marc Schiller, Technology Search Committee, School of Architecture, University of Southern California, Los Angeles CA 90089-0291.

AutoCAD™-Compatible Energy Analysis

Softdesk Energy, a new CAD-based energy analysis software for architects and engineers, was developed as part of the U.S. Department of Energy (DOE) Advanced Energy Design and Operations Technologies (ADEOT) and Energy Efficient Industrialized Housing projects. The software development was funded under a Collaborative Research and Development Agreement among the Pacific Northwest Laboratory (PNL), the University of Oregon, and Softdesk, Inc.

In developing Softdesk Energy, PNL was responsible for computational analysis, while the University of Oregon developed the geometry interpretation and the user interface. Softdesk engineered the internal links with AutoCAD and will deliver the product to its customers. Softdesk Energy integrates heating and cooling load calculation capabilities (based on ASHRAE's Simplified Energy Analysis Method, SEAM) with AutoCAD drafting tools and Softdesk's building design software.

Softdesk Energy can be accessed during the drawing/design process once the outside perimeter of the building has been specified. In a few seconds, the architect can have answers about complex energy issues and review several options to compare their impact on design.

Softdesk Energy provides a foundation for the development of other energy-related capabilities, such as code/standards compliance tools, lighting design tools, and detailed energy simulation packages. Softdesk Energy is scheduled for release with the next version of Softdesk's architectural products.

—G.Z. Brown

Send Word—Any Word!

Thanks to all of you who contributed letters, announcements, or articles! Keep 'em comin'! Feel neglected because your favorite project, cause, or university hasn’t been in the News? Haven't sucked up to the editor recently? Take mouse in hand. Send stuff to the address below, fax something interesting to 209-885-9428, or if you're a commuter on the superduper infohighway, send your modem with your hot item (e-mail it to bhagland@osprey.cs.uidaho.edu).

SESE News
To Bruce Haglund
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