BUCKMINSTER FULLER INSTITUTE
BFI.ORG

DESIGN SCIENCE NEWS

Welcome to Vol. 8 No. 8 of Design Science News, the e-bulletin of the Buckminster Fuller Institute

Design Science News brings you news from around the world related to humanity's option for success and comprehensive design solutions. It also features updates from BFI and periodic special offers for our members.

Buckminster Fuller Challenge call for entries

The Buckminster Fuller Challenge
Catalyzing the vanguard of a design science revolution

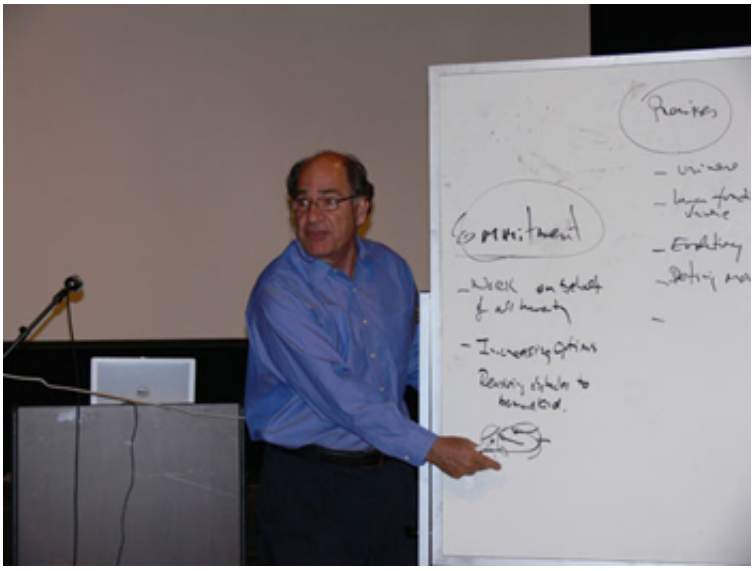
The Buckminster Fuller Institute has announced a call for entries to THE BUCKMINSTER FULLER CHALLENGE, an international design science competition which seeks to confer a prize of $100,000 to a single winning solution.

Prize monies will be awarded in June 2008 to support the development and implementation of a solution that has significant potential to solve humanity's most pressing problems in the shortest possible time while enhancing the Earth's ecological integrity.

The official Entry Form is now available at the Challenge website.

Design Science Workshop: November 17th & 18th

in New York City



A Weekend Seminar with Dr. Michael Ben-Eli
An exploration into the legacy of Buckminster Fuller, the relevance of Fuller's Design Science and the Five Core Principles of Sustainability developed by Dr. Ben-Eli

Dates: November 17th & 18th, 2007
Location: Helen Mills Theater, 137 West 26th St., NYC
Fee: $750 (fee includes full program, refreshments, reception, 200 page program reference reader)

The Buckminster Fuller Institute is pleased to offer the professional community a weekend-long seminar with Dr. Michael Ben-Eli, a close collaborator of Buckminster Fuller. Dr. Ben-Eli is an international consultant on management and organization with extensive experience in the use of systems thinking and cybernetics in planning and problem solving. Visit bfi.org to read more and sign up for the program.

Buckminster Fuller Institute Network Directory

Current BFI Members who have NOT confirmed they wish to be included in the 2007 BFI Network Directory should contact Angela Molenaar in Membership Department immediately am (at) bfi (dot) org or 718.290.9282. The Directory will be available online by mid-October, 2007 ONLY to current members.

A print version to of the Directory will be mailed to members at or above the Associate Level.

Store Special: BFI Tote Bag $19.95

We are featuring our 100% organic cotton BFI Tote Bag for sale this month for $19.95! To purchase a bag for yourself or a friend, visit: Dymaxion Artifacts

TRENDS & PERSPECTIVES

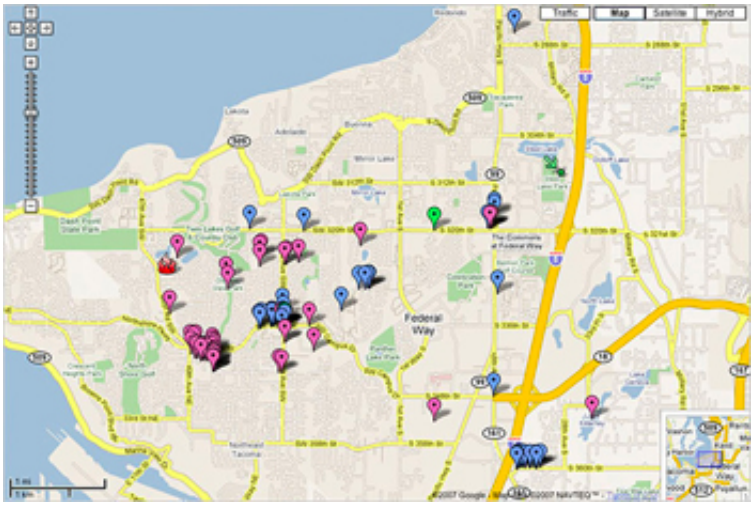
Borrowing from nature's best ideas

Forty-five million years ago an unfortunate fly got stuck in some tree sap and met a sticky end. Today the same fly is responsible for increasing energy efficiency in solar cells. By studying the fly's eye, scientists have developed a new kind of light-capturing material.

Meanwhile, over in Namibia, an unwitting desert beetle is helping farmers to irrigate their fields and airports to clear their runways of fog. When a fog rolls in across the Namib desert the beetle does a handstand and collects fog droplets on its specially adapted shell. The droplets dribble down into the beetle's mouth, providing it with a well-earned drink. By studying the structure of the beetle's shell scientists have developed a synthetic material that is also capable of mopping up fog.

These discoveries are just a couple of examples from a burgeoning scientific field known as biomimetics – copying good designs from nature. Increasingly scientists and engineers are realising that nature, with the benefit of millions of years of evolution, holds the key to some of the very best ideas. (Source: The Guardian)

With tools on Web, amateurs reshape mapmaking



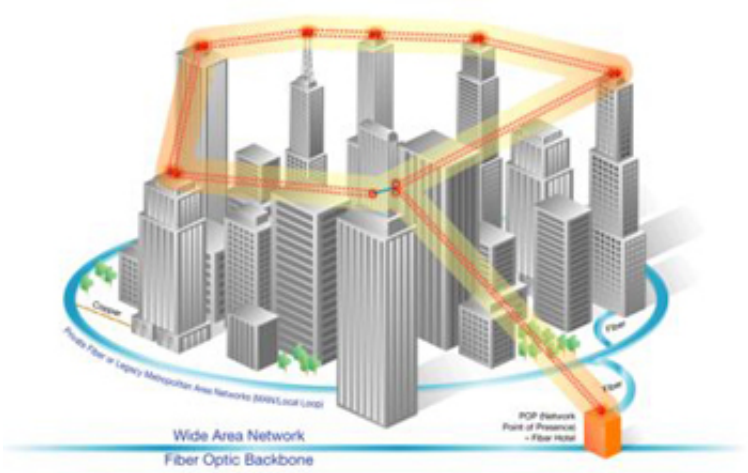
On the Web, anyone can be a mapmaker.

With the help of simple tools introduced by Internet companies recently, millions of people are trying their hand at cartography, drawing on digital maps and annotating them with text, images, sound and videos.

In the process, they are reshaping the world of mapmaking and collectively creating a new kind of atlas that is likely to be both richer and messier than any other.

They are also turning the Web into a medium where maps will play a more central role in how information is organized and found. (Source: New York Times may require free registration)

A new old idea



When most people switch on a desk lamp, they usually want a little extra illumination. But not John Goodey, an engineering student at Oxford University. When he flicks the switch and turns on his lamp, a sensor on his desk downloads music tracks digitally encoded within tiny flickers in the lamp's light. The music is

then relayed through a pair of nearby speakers. This unusual set-up offers a glimpse of a future in which light, rather than radio waves, is used to send information. The concept, known as optical wireless or free-space optics (FSO), promises better security and higher data-transfer rates (up to 10 gigabits per second) than existing radio-based communications technologies, says Dominic O'Brien, a leading engineer in the field and Mr Goodey's research supervisor at Oxford.

FSO is already used in a few niches: to connect networks in nearby offices without having to string cables between them, for example. But plans are afoot to extend the idea into a number of new areas. For example, the subtle flickering of car headlights and tail-lights could be used to transmit speed and braking information to other vehicles, to help prevent collisions. Traffic lights could alert cars when they are about to change, or broadcast the latest congestion update to waiting vehicles. In the home, FSO could be used together with interior lighting to provide extremely fast internet downloads. Since light does not travel through walls, there would be no need to worry about neighbours snooping on your e-mail, or piggybacking on your broadband connection.

Futuristic though this sounds, FSO is by no means a new idea. Soldiers in ancient Greece used polished shields to send battle orders to each other over vast distances in the form of flashes of sunlight. More recently, so-called “heliographs” have been used to relay military signals in a similar way. And it is only in the past ten years that the British navy has phased out its use of Aldis lamps to convey Morse code signals from ship to ship. Yet just as this old analogue technology was being retired, its new digital counterpart was making its debut. In the past few years a small number of companies, such as Terabeam, LightPointe and Cablefree Solutions, began offering businesses point-to-point optical systems that could send data between buildings. (Source: The Economist)

Bringing the ocean to the world, in Hi-Def

Thousands of miles of fiber-optic cables are strung across the world’s oceans, connecting continents like so many tin cans in this age of critical global communication. So the fact that about 800 more miles of fiber-optic cable will soon thread the sea floor off the coast of the Pacific Northwest might not seem particularly revolutionary. Until you meet John R. Delaney, part oceanographer, part oracle.

“This is a mission to Planet Ocean,” said Mr. Delaney, a professor at the University of Washington. “This is a NASA-scale mission to basically enter the Inner Space, and to be there perpetually. What we’re doing is bringing the ocean to the world.”

Under a $331 million program long dreamed of by oceanographers and being financed by the National Science Foundation, Professor Delaney and a team of scientists from several other institutions are leading the new Ocean Observatories Initiative, a multifaceted effort to study the ocean — in the ocean — through a combination of Internet-linked cables, buoys atop submerged data collection

devices, robots and high-definition cameras. The first equipment is expected to be in place by 2009.

A central goal, say those involved, is to better understand how oceans affect life on land, including their role in storing carbon and in climate change; the causes of tsunamis; the future of fish populations; and the effect of ocean temperature on growing seasons. Oceanographers also hope to engage other scientists and the public more deeply with ocean issues by making them more immediate. Instead of spending weeks or months on a boat gathering data, then returning to labs to make sense of it, oceanographers say they expect to be able to order up specific requests from their desktops and download the results. (Source: New York Times may require free registration)

RESOURCES

Back to school: the Sally Ride interview

America's First Woman in Space on Why Science is Cool

Sally Ride, America's first woman in space, has emerged as one of the nation's leading proponents of science education - particularly for middle-school girls. Dr. Ride's journey from a high school tennis player to NASA celebrity involved a lot of math. After earning much-deserved fame and relative fortune from her space endeavors, Ride directed her attention to what she sees as a brewing national crisis: a dearth of female students pursuing science and engineering careers.

To alter this trajectory, in 2001 she founded Sally Ride Science, an organization that hosts invention contests and festivals and produces supplemental educational materials aimed at making science fun, interesting and accessible for tweens.

Inventors Digest landed an interview with Ride to talk about science education and the importance it plays in the nation's future.

Inventor's Digest

Reality Sandwich seeks contributors

A new web magazine for these times of intense transition, Reality Sandwich covers topics from sustainability to shamanism, alternate realities to alternative energy, remixing media to re-imagining community, holistic healing techniques to the promise and perils of new technologies. It hopes to spark debate and engagement by offering a forum for voices ranging from the ecologically pragmatic to the wildly visionary.

Reality Sandwich includes news, reflective essays, arts, interviews, podcasts, and forums. Counteracting the doom-and-gloom of the daily news, the site is a platform for perspectives conveying a different vision of the transformations we face. Since launching the "beta" site in May, it has published over 200 articles and drawn more than 45,000 unique visitors.

Reality Sandwich is looking for writers to help strengthen the site in the areas of design science, sustainability, governance, and activism. Contact: ken (at) realitysandwich (dot) com

EVENTS

Design for the Other 90% at the Cooper-Hewitt National Design Museum

On exhibit May 4th - September 23rd, 2007

On view in the Arthur Ross Terrace and Garden, this exhibition highlights the growing trend among designers to create affordable and socially responsible objects for the vast majority of the world's population (90 percent) not traditionally serviced by professional designers. Organized by exhibition curator Cynthia E. Smith, along with an eight-member advisory council, the exhibition is divided into sections focusing on water, shelter, health and sanitation, education, energy and transportation and highlights objects developed to empower global populations surviving under the poverty level or recovering from a natural disaster. For more information, visit Design for the Other 90%

Call for Art and Poster Papers for Symposium on "Synergetics and Morphology"

The Synergetics Collaborative announced today that it is calling for poster papers, 2-D, 3-D, and digital art to be submitted for possible inclusion at the concomitant art show at the symposium on "Synergetics and Morphology: Explorations into the Shapes of Nature" on Saturday and Sunday, November 3rd and 4th, 2007, at The Rhode Island School of Design (RISD).

The symposium, the poster papers and the art show will appeal to a broad range of individuals who share a common interest in morphology (the art and science of form which was first defined and studied systematically by Goethe).

In addition to presenting an engaging program around the intriguing concept of "the Form of Nature", the event will include a reception on Friday evening November 2nd and a dance performance on Saturday evening November 3rd. The event will also exhibit participants' art work on the theme of "Synergetics and Morphology" at the nearby Waterman Gallery and The Edna Lawrence Nature Lab.

There will be limited space in RISD's Waterman Gallery and at the Nature Lab for exhibiting artifacts. The deadline to submit an application to include art work in the exhibit is 1 October. More information and an application form are available at theSynergetics Collaborative website

Limited space will be available for Poster Papers. Please send abstracts (150-200 words) with your request to present a poster paper to papers (at) synergeticists (dot) org by the 1 October application deadline.

Have you come across interesting Design Science news articles, resources, or events?

We invite you to forward them so we can consider them for inclusion in future e-bulletins. Send them to: designsciencenews (at) bfi.org

If we use your suggestion for future e-bulletins and you would like to be credited by name, please indicate it in your e-mail.

Thank You!
