

The Integrator



INCOSE North Star Chapter



Volume 5, Issue 3

June 2009

North Star Newsletter

INCOSE North Star Newsletter Communication

Please submit comments and SE articles of interest to Eileen.Arnold@BAEsystems.com. Eileen Arnold, Editor

**A clever person solves a problem.
A wise person avoids it.**
- Einstein

Systems Engineering at its Best!

The Solar Decathlon



The U.S. Department of Energy will host the Solar Decathlon—a competition run on the National Mall in Washington, D.C. October 8-16 in which 20 college and university student teams compete to design, build, and operate the most attractive, effective, and energy-efficient solar-powered 800 square foot house. The University of Minnesota is expected to finish in the top 5 as a first year participant! The contest is held every two years. For a list of the other 19 competing universities, go to <http://www.solardecathlon.org>.

The Solar Decathlon is also an event to which the public is invited to observe the powerful combination of solar energy, energy efficiency, and the best in home design. The University of Minnesota is planning a pre-run of the systems here in Minnesota, concurrent with the Minnesota State Fair in September. Watch your North Star email for more information in August. If you

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Chapter President's Corner

Neill Radke, Eaton Corporation and John Palmer, U of Minnesota, 2009 Co-Presidents

Great news – the North Star Chapter has again received the Gold Award for chapter achievements in 2008! That was possible through the efforts of many and reflects the good health of our local organization. However, we cannot rest on our laurels and must proceed onward and upward if we are to maintain our record. To that end the Leadership Team continues to implement actions within the strategic plan for future chapter activities. This fall, the Leadership Team will hold a separate meeting to develop next year's North Star program. Anyone interested in helping to guide our future efforts will be invited to attend and participate. So, put on your thinking caps and, if you have ideas you would like us to consider, please let either John or I know. We will put your idea on the agenda and your name on the meeting invite.

We have completed the first half of an exciting 2009 program for the chapter. On May 28th, the chapter was hosted by the University of Minnesota where a student team described their entry in the International Solar Decathlon competition to be held in Washington, D.C. Special thanks to the team for sharing their experiences with the chapter!

On July 12th, we will provide an unusual, highly enjoyable evening that includes the best of the outdoors. We are planning a one-hour tour of Lafayette Bay on Lake Minnetonka on the 106 year old Museum of Lake Minnetonka, also known as the Steamboat Minnehaha. Following that, we'll enjoy a delightful dinner at the Biella Italian Restaurant in antique warehouse surroundings.

To get involved, please contact:

jpalm@usfamily.net or NeillBRadke@Eaton.com

North Star Chapter Website
<http://www.incose.org/northstar>

can make it to the Mall in Washington, D.C. the public showings are October 9-13 and October 15-18.

The 10 (Hence the name "Decathlon") contests conducted on the house:

- [Architecture](#) — 100 points
- [Market Viability](#) — 100 points
- [Engineering](#) — 100 points
- [Lighting Design](#) — 75 points
- [Communications](#) — 75 points
- [Comfort Zone](#) — 100 points
- [Hot Water](#) — 100 points
- [Appliances](#) — 100 points
- [Home Entertainment](#) — 100 points
- [Net Metering](#) — 150 points

The Solar Decathlon consists of three major phases:

- **Building:** This is where most of the work—and the learning—happen. In addition to designing houses that use innovative, high-tech elements in ingenious ways, students have to raise funds, communicate team activities, collect supplies, and work with contractors. During the construction, students from all of the disciplines involved are encouraged to participate in the hands-on experience of marrying all of the design ideas and technology together into a working home.
- **Moving to the Solar Village:** When it's time for the Solar Decathlon, the teams transport their houses to the National Mall in Washington, D.C., and rebuild them on site. To accomplish this will take a caravan of 6 tractor trailer rigs to deliver the house, followed by 7 days of round the clock assembly and testing.
- **Competing:** During the competition itself, the teams receive points for their performance in the 10 contests, and open their homes to the public for walkthrough tours.

Even though the home will be connected to a utility grid, the home is designed to have a net zero energy consumption from the utility provider using photovoltaic technology, producing more power than consumed. In fact, the latest energy modeling projects the University of Minnesota entry to produce 13 months worth of electricity per year when the house is returned to Minnesota!

The contest promotes an integrated or "whole building design" approach, a Systems Engineered approach, to new construction. This approach differs from the traditional design/build process because the design team considers the interactions of all building components and systems to create a more comfortable building, save energy, and reduce environmental impact.

More to come in August!

WELCOME, NORTH STAR NEW MEMBERS!

Name	Company	Title
Paul Andersen	ATK	SE
Jeffrey Bangen	ATK	Sen. Prin. SE
Brian Block		
Mike Bosveld	Stratasys Inc	Prin. SW Eng.
Mark Colestock	Gen.Dynamics	Sr. Lead SE
Tom Furey		
James Kalberer		
Steven Rusch	ATK	Principal SE
James Snyder	Medtronic	PM
Scott Vanderlinde	Boston Sci.	SE
Kriota Vilandre		
Lynnay Wanggaard	BAE Systems	Business Analyst

North Star's 2009 Meetings

12 July	Cruise on Steamboat Minnehaha/Biella's	Excelsior Dock
19-23 Jul	INCOSE International Symposium/Social	Singapore
13 Aug	SE in Operations and Maintenance	Excel Energy
10 Sep	SE in Determining Architecture	Eaton Corp.
8 Oct	SE in Architecture and Trade Studies	Lockheed Martin
12 Nov	SE in Requirements Development	Honeywell
11 Dec	Member Holiday Party + Guest	TimberLodge SouthTown Ctr