



March 2012
Volume 4, Issue 1



2010 & 2009 Silver
Chapter Circle
Award Winner



2008 Bronze
Chapter Circle
Award Winner

THE PRESIDENT'S CORNER



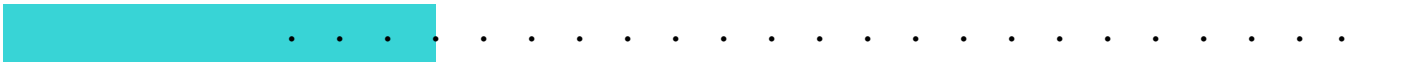
Greetings to all members of the Cleveland-Northern Ohio Chapter. I hope the year is off to a great start for everyone and you are enjoying the early taste of spring. I'm certain we'll pay for this later, but the mild weather is certainly welcome.

This is the first time I've contributed an article to the newsletter. Frankly, I'm not much of a writer, but I have two topics to discuss.

First, I spent the past weekend as a judge at the First Robotics Buckeye Regional Competition, watching teams of high school students operate robots that they designed and built shoot basketballs into a series of hoops. Teams came from all over Ohio, the other Great Lakes states, and even two from Canada. It is amazing what these kids were able to accomplish, with their imagination and a little encouragement. In talking to these kids, I was able to see how each team applied principles of

systems engineering, to develop their final design. The teams were given competition guidelines and rules (user needs and constraints), a basic set of parts, and about two months to design and build their robot. Most teams described doing trade studies and functional analysis, prototyping, and system testing—all based on whatever strategy they elected to pursue. They also had to factor in the other teams they might compete against or cooperate with. They did not know that they were doing systems engineering, but they were, and they did it pretty well. My point is that we often think systems engineering is appropriate for huge, complex problems and projects, but even for smaller problems, a systematic process with the end result in mind can really make a difference.

The second thing I want to talk about is the future. The Cleveland-Northern Ohio chapter was formed four years ago by a small group of highly motivated people who had an "aha moment" at an INCOSE International Workshop. They decided to establish a chapter in Cleveland—initially centered on NASA Glenn, but reaching out to the larger technical community. The founders laid a strong foundation for our chapter and left a legacy to guide us. Early leaders still support and nurture the chapter, having recruited the current leadership from among the local membership. As we move forward, I encourage more people to take an active role in



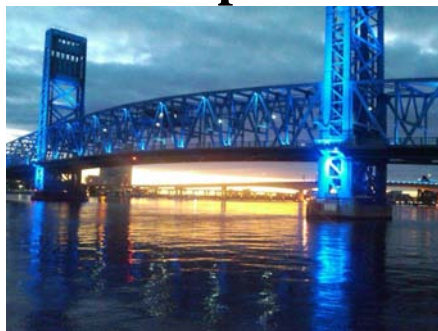
the chapter. Each member has some particular knowledge or perspective on systems engineering that can benefit other members. We all have issues or problems for which the membership could provide helpful insights. Monthly chapter meetings provide a great environment for discussing such topics. I also encourage you to participate in one of the committees that help the board serve the chapter. It is only through your involvement that the chapter continues to be a vital organization, providing a source of SE knowledge and experience we can tap.

In closing, I want to emphasize that the chapter leaders and I are available at any time to discuss how we can increase the value the chapter delivers to each member.

Sincerely

Joel Knapp

2012 INCOSE International Workshop



A few of us spent a pleasant warm weekend in Jacksonville, FL at the end of January

attending IW2012. This year during the opening plenary the new INCOSE officers were installed. While all the working groups met over the weekend, including the Power and Energy Working Group led by our own Ray Beach and John Juhasz, the main thrust again this year was on Model Based Systems Engineering. With attendance around 170, the MBSE workshop had the most participation ever showing that there is a growing interest in these tools and concepts. You can view the agenda and download the presentations at www.omgwiki.org/MBSE/doku.php. Don't forget IW2013 will also be held in Jacksonville so if you can, plan on attending.

2012 International Symposium

22nd Annual INCOSE International Symposium in Rome, July 9 – 12, 2012.

www.incose.org/symp2012/

Upcoming Tutorials

There are two upcoming series of tutorials for INCOSE members. Systems Engineering Certification Tutorial Webinar and Systems Engineering Fundamentals Tutorial Webinar. These are starting the week of April 2, they are free but call in lines are limited. If interested contact Joel Knapp or Dennis Rohn for more information.

Recent Chapter Meetings

January 17, 2012

Christopher Pestak (Manager of NASA & Space Programs for the Battelle Memorial Institute) presented “Emerging Technologies that Can Shape the Future.”

Chris first explained that Battelle is the world’s largest independent, nonprofit R&D corporation (\$6B/year budget; 20,000 employees). Battelle applies science and technology to solve pressing real-world problems.

Chris then stressed the key role Systems Engineering plays in the development and commercialization of advanced technologies, at Battelle. It’s not “The Big Picture,” but rather “The *Complete* Picture.” The entire Life Cycle must be addressed, beyond the traditional focus on design and manufacture.

We were told that bio-based approaches are the way to go, if possible, “because God is a Systems Engineer.” “The natural world is an incredibly complex, yet very orderly and completely sustainable system.”

Chris emphasized that a major Systems Engineering challenge is finding solutions for U.S. energy needs. He gave examples of innovative energy-conversion technologies developed by Battelle, toward that goal.

February 21, 2012

Past President Dennis Rohn spoke on the topic “Model-Based Systems Engineering: becoming mainstream.” He described the emergence of MBSE and various initiatives guiding its development:

- What is MBSE?
- Why MBSE?
- Vision: Integrated Systems-Oriented Decision Support
- INCOSE MBSE Roadmap
- NASA’s MBSE Challenges
- Ontologies

Dennis recapped the MBSE Workshop conducted during INCOSE’s International Workshop 2012.

His PowerPoint slideshow (*IW2012 MBSE Re-Cap*) is available on the C-NO Page in INCOSE Connect, under “Chapter Meeting Minutes,” in the folder “Chapter Meeting Materials 2012-02-21.”

- Bill Klinger

Did you know

There's a working group for that! INCOSE has a number of working groups that are the heart of INCOSE's Technical Operations. Whether you're interested in Power and Energy, Model Based Systems Engineering, or any number of other applications of Systems Engineering, INCOSE's working groups provide an INCOSE member with excellent reference information, access to working group products, and the opportunity to get involved! Visit [INCOSE.org](http://www.incose.org) for more information.

Like us on Facebook

If you are on Facebook search for Cleveland-Northern Ohio INCOSE Chapter and “like” us. And of course don’t forget to check our website for information and updates. <http://www.incose.org/cleveland/index.htm>

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March 2012

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