



# Midwest Gateway Newsletter

## International Council on Systems Engineering

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### President's Corner

Bob Scheurer

President MGC INCOSE

**What a Year!** - I know it's a cliché, but time sure does fly when you're having fun. Our Midwest Gateway Chapter is wrapping up a remarkable year in many ways. We had a full slate of programs for the year, we conducted a chapter tutorial in April, we welcomed our 100th active member this summer, we had a strong showing at the International Symposium in Chicago, and we're applying for the Circle Award at the Gold level for the first time ever; and I haven't even mentioned all of the Outreach events! Doing all of these activities takes a devoted membership and supportive board, so we can all take pride in the healthy participation by our members in Midwest Gateway activities.

At our Member Appreciation social on December 2, we announced your new board members for 2011 and presented awards for Outstanding Chapter Member, Best

(see **President's Corner...** on page 4)

### INCOSE MGC 2010 Award Recipients

Please join us in congratulating our 2010 award recipients, who were announced at our Dec. 2 Member Appreciation Social.

2010 Award Recipients:

#### Outstanding Chapter Member Award: Steve Recker

Recognized for exemplary contributions made for the betterment of our Midwest Gateway Chapter and Systems Engineering

#### Best Presentation Award: (Tie)

"*Extending Black Box System Decomposition For Software Intensive Systems*" by David Sharp and

"*Architecture – Ignore at your own risk (DODAF 2.0 – It's the law for all future DOD programs)*" by Dale Waldo and Louis Pape II

Recognized for best presentation at a Midwest Gateway Chapter meeting in 2010

#### Inspiring Outreach Award:

Marcos Chu

Recognized for contributions toward the improvement in understanding of systems principles and application of systems engineering by our nation's youth and the general populous

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### INCOSE Midwest Gateway Chapter 2011 Officers

The 2011 New Board Members of the Midwest Gateway INCOSE were announced at our 2010 Member Appreciation Social Event:

President 2011: **Bill Bezdek**

President-Elect (President in 2012): **John Headrick**

Director (11/12): **Bill Jennings**

Director(11/12): **Steve Guenther**

Director (10/11 Fill-in remaining term of seat vacated by John Headrick): **Bill Beavin**

Secretary (11/12): **Mike Mobley**

They will be joining the others on the board **Bill Schoening** (Treasurer), **Dale Waldo** (Director), and **Bob Scheurer** (Past President)) in January 2011 to bring you programming and other events designed to elevate the practice of Systems Engineering.

Thanks to our outgoing 2010 board members, Mike Franco (President-Elect/relocated), Dick Mayer (Director), and Brian Beyer (Past President), for a job well-done.





## Going for the Gold: INCOSE Circle Award

### Midwest Gateway Chapter Awards



appropriately in the points tally for our chapter. Let me know if you have any questions. Responses are needed by CoB on Monday Dec. 20, 2010.

Thanks for your on-going support of INCOSE and help in getting our Midwest Gateway Chapter recognized at the Gold Circle level among its peers world-wide.

Bob

Bob Scheurer, P.E., P.M.P.  
President, Midwest Gateway  
INCOSE Chapter 2010

Dear MG INCOSE Members,

Every year, INCOSE recognizes those chapters who “perform to the highest goals and standards” in an award called the “Circle Award”. Most recently, our Midwest Gateway Chapter was honored to receive the Silver Circle Award at this year’s 20th International Symposium. Thanks to very involved membership, we have achieved that level of recognition for the past four years running.

For 2010, our chapter stands a reasonable chance at achieving the highest level “Gold” for the first time ever! However, we need your help.

As you would expect, the gold level

requires a high degree of verifiable results across a number of categories. I’ve extracted those which are relevant to activities potentially accomplished by individual members but unbeknownst to our chapter and for which we can receive credit in the award application.

Please take a look at the category line items below and make an entry for any of those for which you may have made a contribution.

Verifiable evidence is important. If you can attach the relevant evidence in your e-mail reply to me, I’ll make sure it gets in the evidence folder and counted

### INCOSE Circle Award Application - Member Participation Categories:

- 5A** Refereed Article (*Evidence Needed:* Full reference of the article or copy of the article)
- 5B** Had an article on systems engineering published/presented in journals (*Evidence Needed:* Full reference of the article or copy of the article)
- 5C** Presented a Technical Paper in a symposium or seminar sponsored by INCOSE (*Evidence Needed:* Full reference of the article or copy of the article)
- 5D** Participated in an INCOSE Technical Group that meets at the International Workshop (*Evidence Needed:* Name, Working Group, Role)
- 5E** Participated in an local Technical Group such as an Interest Group or Working Group (*Evidence Needed:* Name, Working Group, Role)
- 6C** Participated at a significant level in a Systems Engineering activity or presentation for pre-college/college/trade school individuals; can be broader than INCOSE (*Evidence Needed:* Documentation of the activity, such as a flier or newsletter, and hours invested)
- 6E** Was an unpaid speaker to universities, career days, civic organizations, other technical societies, or non-INCOSE sponsored conferences or seminars (*Evidence Needed:* unpaid speaker’s name, documentation of the event through a letter from the organization or other material, and brief summary of the event)
- 8L** Received INCOSE Certification as a ASEP, CSEP, or ESEP (*Evidence Needed:* Name, certification level, and year received)
- 9A** Participated in or contributed to other noteworthy events, such as National Engineer’s Week Teach-Ins, Donations to INCOSE Foundation, Special project, Student Award Program, etc. (*Evidence Needed:* Name, Description of other noteworthy event, and related documentation/flier/ newsletter/material)







*Photos from the Dec. 2010  
Member Appreciation  
Social Event*





## President's Corner... (cont)

Presentation in 2011, and Inspirational Outreach. See another article in this newsletter for the specifics. Congratulations to all new officers and award recipients as well as the outgoing board members. Thanks for a job well-done.

As we look forward to 2011, we're planning to keep the momentum going. We're lining up programs and other events which will hopefully increase your awareness and understanding of the various facets of systems engineering. We're additionally supporting another STEM (Science, Technology, Engineering, and Math) initiative by sponsoring a new BEST Robotics team in 2011. Watch for their appearances and robots at various chapter events throughout the year. You may recall that our chapter has led efforts in the Midwest for FIRST Robots teams as well.

I know I've said it before but it's worth repeating: If you'd like to be a part of this dynamic organization, we'd love to have your involvement. It can be something as simple as writing a newsletter article on a topic of interest, participating at an Outreach Event, giving a chapter presentation, or any other activity related to our systems engineering mission.

Thanks again for a great year. I hope to see you at an upcoming chapter event in 2011.

## INCOSE Midwest Gateway Chapter Meetings – 2010 Review

The Midwest Gateway Chapter of INCOSE had a full and varied array of presentations in 2010. Our menu of included:

### New approaches to traditional system engineering topics

- *"Dealing with Cognitive Bias in Decision Making"*  
– Bill Siefert
- *"Exploring the Spectrum of Needs Using Decision Analysis"*  
– Suzanne Bergman
- *"Extending Black Box System Decomposition for SW Intensive Systems"*  
– David Sharp
- *"Architecture – Ignore at Your Own Risk (DODAF 2.0)"*  
– Lou Pape and Dale Waldo
- *"Integration of Virtual Engineering and Model Based SE Tools"*  
– Akshay Kande

### INCOSE organization and outreach

- *"Using SE in Learning Communities"*  
– Marcos Chu
- *"Highlights off 2010 INCOSE International Symposium"*  
– Panel of 6 chapter members

### Joint onsite visit with MSPE and IEEE

- *"Tour of Missouri Department of Transportation (MoDoT) Traffic Control Command Center"*

All of the meeting presentations were well attended and provoked lively and occasionally passionate discussion which often lasted beyond the appointed meeting time. The presentations that are available are posted on our website at <http://www.incose.org/mdwest/presentations.htm>.

The 2010 meeting series ended with a Member and Guest Appreciation Event at Spazio's restaurant complete with service and best presentation awards, introduction of the 2011 officers, a video of the year's highlights, and a delicious menu of hors d'oeuvres.

Heartfelt thanks to all who made our outstanding 2010 season such a success. - Richard Mayer [<mailto:drmayer902@gmail.com>]

## Kirkwood High School Outreach – Boeing engineering challenge

Brian Beyer, INCOSE 2009 past president and outreach volunteer, visited Kirkwood High school on December 9th to work with a team of students involved in the Boeing Engineering Challenge (BEC). During the 2010-2011 school year, the team of students will design, build, and test a glider as part of the BEC challenge to teach students at local high schools the principles of aerospace engineering. A series of design reviews are incorporated into the process culminating in a final test readiness review and "fly-off" versus the competing teams in May, 2011 at Washington University.



The Kirkwood High School BEC Team with instructor, John Mackin.



***INCOSE Members teach Seniors at Collinsville High School about engineering***

INCOSE MG Chapter members, Brian Beyer and Mike Vangel, made a trip over to Collinsville, IL along with Boeing engineers, Melissa Stephenson and Rob Thompson, on December 7<sup>th</sup> to spread the message of the importance of careers in the STEM related fields. They talked to 30 high school seniors about how to get involved in engineering careers. INCOSE members discussed the importance of engineering professions and how

to prepare for careers in engineering. Brian taught a segment on the product development process while Mike discussed the educational requirements, expectations for college, and ethics/integrity in association with becoming a professional engineer. The class then broke into two teams and practiced their new engineering design skills by building a ping pong ball shooter during the hands-on class activity.

The students really enjoyed the experience and several noted they were applying to college (or had already applied) to pursue engineering careers.

The photos show Mike Vangel and Brian Beyer holding the INCOSE chapter banner during the Outreach presentation. Other photos include the students concepts/prototypes for ping pong ball shooters.



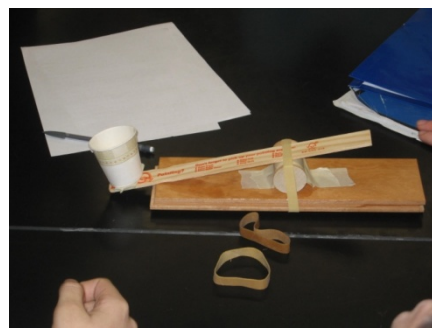
Brian Beyer and Mike Vangel, INCOSE instructors



Mike Vangel and Melissa Stephenson coach Team 1 on building their prototype



Brian Beyer teaching the Product Development Process



Team 1's shooter



Team 2's shooter



Reaching the Vision – 2010 Summary

Our chapter continues to work hard in meeting the objectives set out at the beginning of 2010. We’ve almost met or exceeded all of our goals.

We only need help with our goal #2. These were not arbitrary goals. We set out to gather the evidence that our INCOSE Chapter was one of

the best in the INCOSE organization. You can help by letting us know what you’ve been doing. See the newsletter article on page 2.

INCOSE Midwest Gateway Chapter 2010 Goals	Status	Dec. Score
1) Develop and deliver at least one tutorial		1 out of 1
2) Have at least two member papers accepted for the next symposium		TBD out of 2
3) Provide at least three special recognitions to members in the chapter		5 out of 3
4) Publish at least four chapter newsletters		5 out of 4
5) Conduct at least five outreach engagements with other societies, universities, schools, etc.		6 out of 5
6) Have participation of at least six Midwest Gateway Chapter members in IS2010		12 out of 6
7) Identify at least seven events where our chapter banner is exhibited (and photographed where possible).		7 out of 7
8) Hold at least eight chapter general membership meetings/presentations		11 out of 8
9) Receive at least nine new members into our local chapter		16 out of 9
10) Conduct at least ten Board of Directors meetings.		12 out of 10

“Engineering Career Day”  
at the Science Center



The Engineering Career Day at the St. Louis Science Center on October 2nd was successful. Barb Sheeley, Mike Mobley, and Dale Waldo staffed the Midwest Gateway Chapter’s booth, where they met and talked to quite a number of people – of all ages.



Pearls of Wisdom

- Indecision is the key to flexibility
- You can’t tell which way the train went by looking at the tracks
- There is absolutely no substitute for a genuine lack of preparation



INCOSE MWG 2010 Board of Directors

- President:**  
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Bill Bezdek  
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