



# Midwest Gateway Newsletter

## International Council on Systems Engineering

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### President's Corner

Bob Scheurer

President MGC INCOSE

As always, I want to thank each of you for your on-going participation in your Midwest Gateway INCOSE Chapter. As you can see from our newsletter, we have a lot going on. The amazing thing is the activity in our Midwest Gateway chapter is on-going throughout the year.

I'm sure you've seen the news headlines about tighter defense budgets. That shows why it is now, more than ever, important that we continue to network and explore ways for instilling better systems engineering on our programs and projects. And we think our organization is uniquely positioned to help you with that.

Thanks again, and I hope to see you at the next chapter meeting...

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### INCOSE Midwest Gateway 2010 Elections

We are looking for motivated SE Leaders to become candidates to run for election to serve on the MGC of INCOSE Board of Directors (BOD).

INCOSE Midwest Gateway Leadership BOD open positions include:

**President** – Runs the Chapter Operations/Meetings

- 1 year term (2011) with obligation as Past President (and runs the elections committee) the following year.

**President Elect** – Acts as a Vice President

- 3 year commitment – president elect in 2011, President in 2012, and Immediate past president 2013.

**Secretary** – Takes minutes at monthly BOD meetings

- 2 year term, 2011-2012

**Treasurer** – Manages the Chapter funds/budget.

- 2 year term, 2011-2012

**Director(s)** – Run the MGC committees and handle special projects, Promote chapter programs (i.e. Outreach and Lunch meetings)

- 2 positions, 2 year term, 2011-2012

For more info on elections or to become a candidate, please contact Brian Beyer, Past President at [Brian.c.beyer@boeing.com](mailto:Brian.c.beyer@boeing.com) 314-232-9620.

### How Lean are INCOSE's Lean Enablers?

By Bob Scheurer

In today's economy, there is more interest than ever in making sure there's maximum value and minimum waste in everything we do. In 2009, INCOSE developed a guide called "Lean Enablers for Systems Engineering (LEfSE)." That guide describes an approach for incorporating more lean thinking into our various processes and products involved in systems engineering. After counting the number of lean enablers, some people commented that INCOSE's Lean Enablers are not lean. Let's take a close look from that different perspective.

Lean is founded on the belief that there is 40 – 70% waste in everything we do. That waste is assigned to seven areas of concern:

- 1) Overproduction
- 2) Transportation
- 3) Waiting
- 4) Over-Processing
- 5) Inventory
- 6) Unnecessary Movement and
- 7) Defects.

It goes on to lament that it's difficult to identify waste because it's often hidden or misrepresented.

Addressing this waste is what LEfSE is intended to help over-come, or at least bring to awareness. LEfSE identifies six lean principles in its solution set. These are:

- 1) The Value Principle
- 2) The Value Stream Principle
- 3) The Flow Principle
- 4) The Pull Principle

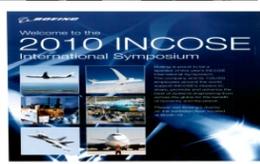
(see *INCOSE's Lean Enablers...* on page 5)

## INCOSE 20th-Year Anniversary International Symposium

It's been a month since the International Council of Systems Engineering's (INCOSE) 20th-Year Anniversary International Symposium held this year in Chicago. And, from all accounts, i.e., identifying useful resources, follow-up networking and many direct contacts, it was indeed successful.

Attendees were provided a wide variety of opportunities, ranging from the many half and full-day tutorials conducted by experts in their fields (beginning even days prior to the formal symposium), to poster and papers displayed throughout the Chicago Regency O'Hare venue, in addition to keynote speakers, panels of experts (addressing priority controversial topics) and multiple (simultaneous) tracks of professional papers presented each day of the symposium. All the papers presented were available through

INCOSE handout materials. And, there was fun to be had as well...witness a few selected photographs of notables in their fields, and organizations (Government, Industry and Academia). Being Chicago, the private banquet theme (at the Navy Pier Ballroom) was "The Blues/Booze Brothers" where, complete with fireworks display, the 1000+ members and guests had a great time!





## *Systems Engineering and Operations Research Short Courses*



**George Mason University's (GMU) Systems Engineering and Operations Research (SEOR)**

department is pleased to announce the availability of technical short courses offered to engineers, scientists, and technical managers for the Fall 2010 semester.

The courses have been designed to offer engineering and technical professionals the opportunity to increase their technical knowledge of systems engineering, operations analysis & research topics that enhance the ability to engineer, optimize, plan, integrate, and manage the design of complex systems.

The courses are introductory 10 contact-hour introductory courses addressing Decision Analysis, Requirements Engineering, Operations Research: Optimization, Intro to Air Transportation Planning,

and Introduction to Systems Architecture Design (note: a follow-up Architecture Design Course will be offered in Spring 2011). All courses are offered in a distance learning format and are open to the general public unless otherwise noted.

Each online course consists of four lectures delivered via the webcasting software *Elluminate Live* and begins at 18:00 Eastern Time. Students must attend all sessions of a course for successful completion. Course completion earns Continuing Education Units (CEU) credit.

For more course information please visit the GMU Office of Continuing Professional Education webpage at: [http://www.ocpe.gmu.edu/programs/seor/seor\\_cert.html](http://www.ocpe.gmu.edu/programs/seor/seor_cert.html) , or for questions related to content, schedule, (Boeing LTP) registration, etc. you can contact [Rob Simons](#) at 314-234-3107.

For registration questions please contact the George Mason Office of Continuing and Professional Education at: 703-993-2109 (<http://www.ocpe.gmu.edu/>)

Boeing employees who wish to use LTP are encouraged to view 'My LTP' on the intranet to get started.

**• COURSES •**

- PEVS 0511 E01: Intro. to Requirement Engineering (Prof. Peggy Brouse)**  
October 6 & 7 and 13 & 14 (Wednesday/Thursday), 6:00PM EST – 9:10PM EST
  - PEVS 0501 E01: Intro. to Operations Research: Optimization (Prof. Kirk Yost)**  
October 18 & 19 and 25 & 26 (Monday/Tuesday), 6:00PM EST – 9:10PM EST
  - PEVS 0541 E01: Intro. to Air Transportation Planning (Prof. Lance Sherry)**  
Nov. 2, 4, and 9 & 11 (Tuesday/Thursday), 6:00PM EST – 8:40PM EST
  - PEVS 0521 E01: Intro. to Systems Architecture Design (Prof. Alex Levis)**  
Nov. 17 & 18 and Dec. 1 & 2 (Wednesday/Thursday), 6:00PM EST – 8:40PM EST
- This course is available only to employees of The Boeing Company*

### *Outreach Opportunity*

The St. Louis Science Center is hosting an Engineering Career Day on Saturday, October 2. We need a total of four volunteers to staff an INCOSE information table and answer students' questions regarding careers in engineering.

Have you ever influenced a young person to pursue a career in engineering? Want to experience the good feeling of making a difference?

Please contact Mike Mobley [michael.d.mobley@boeing.com](mailto:michael.d.mobley@boeing.com) if you are interested in this great opportunity to reach out and give back.

### *Upcoming Midwest Gateway Events*

| Date(s)      | Event                                  | Location                        |
|--------------|--|---------------------------------|
| September 30 | Chapter Meeting                        | Boeing Building 111 Rm. 110     |
| October      | Chapter Meeting                        | TBD                             |
| November     | Chapter Election<br>Tour               | On-Line<br>MODOT Traffic Center |
| December     | Member Appreciation<br>Social , Awards | TBA                             |



#### *Quote of the Day*

The quality of a person's life is in direct proportion to their commitment to excellence, regardless of their chosen field of endeavor.

- Vince Lombardi





## Outreach at St. Charles Community College

Six Midwest Gateway members presented in Professor Dave Niemann's Pre-Engineering classes at St. Charles Community College in September. Your INCOSE Outreach Committee has done this for several semesters.

Two Midwest Gateway members present in each section of the course (three section this semester). The typical presentation includes a systems engineering overview, biographical information about the speakers and benefits of student INCOSE membership.

To receive more information on the Midwest Gateway Chapter Outreach initiative, inquire about your own participation in INCOSE Outreach, or arrange for an Outreach speaker for another organization, please contact Mike Mobley, Outreach Chair, at 314-777-0659.



## Reaching the Vision

Our chapter continues to work hard in meeting the objectives set out at

the beginning of 2010. We're well on our way to completing many of

our goals, as noted in the status board below.

| INCOSE Midwest Gateway Chapter 2010 Goals  | Status | Sept. Score  |
|--|--------|--------------|
| 1) Develop and deliver at least one tutorial   | ●      | completed    |
| 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                                   | ●      | TBD out of 3 |
| 4) Publish at least four chapter newsletters   | ●      | 4 out of 4   |
| 5) Conduct at least five outreach engagements with other societies, universities, schools, etc.            | ●      | 3 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). | ●      | 3 out of 7   |
| 8) Hold at least eight chapter general membership meetings/presentations                                   | ●      | 7 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.  | ●      | 7 out of 10  |



### *INCOSE's Lean Enablers - Cont'd*

INCOSE's list of Lean Enablers lean?" Perhaps that can be answered by referencing Lean Enabler 1.2.2: "Define Value-Added in Terms of Value to the Customer and His Needs". If you as the customer of the lean process think there are Lean Enablers which are

not "value added" in the set, then one could say that LEfSE is not lean. However, if there is a customer somewhere who thinks that the same lean enabler is value added to him/her, then perhaps the list of lean enablers in LEfSE is lean after all!

### *INCOSE MWG 2010 Board of Directors*

**President:**

Bob Scheurer  
[robert.scheurer@incose.org](mailto:robert.scheurer@incose.org)

**President-Elect (Vice President):**

Mike Franco  
[mike.franco@incose.org](mailto:mike.franco@incose.org)

**Secretary (09/10):**

Bill Bezdek  
[william.bezdek@incose.org](mailto:william.bezdek@incose.org)

**Treasurer (10/11 ):**

Bill Schoening  
[william.schoening@incose.org](mailto:william.schoening@incose.org)

**Directors (09/10):**

Dick Mayer  
[richard.c.mayer@incose.org](mailto:richard.c.mayer@incose.org)

Mike Mobley  
[michael.mobley@incose.org](mailto:michael.mobley@incose.org)

**Directors (10/11):**

Dale Waldo  
[dale.waldo@incose.org](mailto:dale.waldo@incose.org)  
 John Headrick  
[john.headrick@incose.org](mailto:john.headrick@incose.org)

**Past President:**

Brian Beyer  
[brian.beyer@incose.org](mailto:brian.beyer@incose.org)

- 5) The Perfection Principle and
- 6) The Respect-for-People Principle.

Each of these principles has major and sub-lean enablers identified with them to support their respective principle. Lean enablers can total from roughly 20 – 40 items under each principle, ultimately resulting in 194 total lean enablers in LEfSE.

Lean enablers range from the more general, such as "Everyone on a program must have a 'Customer First' spirit" to the more specific of "Use metrics to motivate the right behavior." For a complete listing of the Lean Enablers for Systems Engineering, see the INCOSE Lean SE Working Group's public web site at:

<http://cse.lmu.edu/about/graduateeducation/systemsengineering/INCOS E.htm>

So the question remains, "Is