

The Integrator

INCOSE North Star Chapter



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North Star Newsletter

INCOSE North Star Newsletter Communication

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Quotable Quotes:

"A complex system that works is invariably found to have evolved from a simple system that worked. A complex system designed from scratch never works and cannot be patched up to make it work. You have to start over, beginning with a working simple system."

John Gall in *Systemantics*

Systems Engineering at its Best!

INCOSE IS 2011 Retrospective

The INCOSE International Symposium, held in Denver Colorado June 14-20, was an outstanding success based on the sampling of paper/panel interest and audience participation. Many participants stated the thing they like most about attending the INCOSE Symposiums is the discussions they had with other Systems Engineers (SE), that "get it" about Systems Engineering without the need to explain every sentence. How refreshing!

The membership in INCOSE is 8399 strong for 2011. This membership spans 55 countries with 62 chapters. Our Corporate Advisory Board (CAB) has 80 organizations helping to direct where we are headed for the future, communicating their SE needs.

Several new Memorandums of Agreement (MOU)s were signed for further collaborative efforts:

- ISSS: International Society of Systems Sciences
- ISSS: International System Safety Society
- PMI: Project Management Institute (reciprocal discounts for products)

Additionally, CAB companies are signing

Chapter President's Corner

**Paul Frenz, General Dynamics-AIS
INCOSE North Star Chapter 2011 President**

With back to school sales in full swing, it's time to look ahead to the fall. This fall we are bringing in Sarah Sheard from Stevens Institute of Technology, School of Systems and Enterprises to give the October North Star chapter presentation October 13th as well as to teach the fall tutorial October 15th. Sarah Sheard is the Principal at Third Millennium Systems LLC and an INCOSE Fellow and Founder's Award Recipient. The topic for the tutorial is "Systems Engineering and Complexity". Several of us have known Sarah for several years and she always provides an insightful presentation. **Honeywell** in Minneapolis will be hosting. Details will be coming soon.

Save the Date: Saturday, December 3rd. Our holiday party has been finalized with a dinner at Santorini's, 13000 Technology Drive, Eden Prairie. We held the party there last year and had such a good time that we decided to return. We'd love to see all or our members attend!

The International Symposium took place in Denver this year June 20-23, 2011. I found the symposium to be very helpful. I attended meetings on Corporate Advisory Board, Measurement Working group, Chapter development, SE reuse, SE Effectiveness as well as many other topics. Next year will be in Rome, Italy and I am already preparing my case to attend. Deadline for draft papers for IS2012 is November 8th. paul.frenz@gd-ais.com

INCOSE 2011 Symposium website:
<https://www.incose.org/symp2011/>

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

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Memorandums of Agreement (MOA)s agreeing to support SE's in their quest for certification credentials in exchange for further discounts. BAE Systems is one of those companies. INCOSE now has 885 total certified Associate Systems Engineering Professionals, Certified Systems Engineering Professionals, and Expert Systems Engineering Professionals (ASEP's, CSEP's, ESEPs) and growing exponentially, thanks to the efforts of INCOSE Certification Program Manager, North Star's own Dave Walden.

There are 40 chartered INCOSE Working Groups. If you are not already a participant in one, consider joining to make a difference in the SE profession! It's easy to choose one with your interests. It's hard to limit it to only one affiliation, though! Many of these working groups participate via phone connections in anticipation of the International Workshop and International Symposium face-to-face meetings. For more information go to the following link: <http://www.incose.org/practice/techops/>. INCOSE Technical Operations, responsible for everything technical, currently has two major technical initiatives; Model Based Systems Engineering (MBSE) and Standards. Competency Frameworks, the major initiative of the Competency Working Group which was recently chartered, is the number one priority for the Corporate Advisory Board (CAB). North Star's Eileen Arnold is the Chair.

The Guide to the SE Body of Knowledge (SEBoK) and BKCASE project is on track to be released in September 2011. The Graduate Reference Curriculum in SE (GRCSE) will also be available for those geared towards the academic side. Additional academic goals to be realized through IW2013:

- 1000 academic and 800 student members
- 40000 systems journal article downloads and .8 ISI impact factor
- Co-Steward with IEEE of Graduate Record for Curriculum for Systems Engineering (GRCSE) and encourage/enable adoption
- Primary contributor of systems thinking and SE related material to pre-college education initiatives
- Re-energized Academic Council with 15 members
- Leading source of SE-Related academic information

The Member Board has the task of creating a "voice of the chapters" as we organize to ensure benefits at all levels of the organization. The Member Board is striving for:

- Balanced representation – domains, cultures, diversity, etc.
- Clusters containing chapters – 3 clusters to start (American, European, Asian-Pacific) geography-based

- 3 Cluster directors representing Chapters at the Board of Directors (BoD) level.
- Key decisions made by the Cluster Board
- Members electing chapter leadership

The above represents what the Member Board is recommending and may not be the final naming and outcome.

The SE Vision 2020 is under consideration for update and restructuring, to include the vision through 2025. A Strength, Problem, Opportunity, Threat Analysis (SPOT) was performed by the INCOSE Leadership, centered on the following major topics.

- Global SE environment & need
 - Systems deployment and analysis
 - Decision analysis and system behavior prediction (emergent properties)
 - Human system integration
 - Domains and problem spaces
 - Societal needs
 - System trends
- SE Principals & Practices
 - Strengths
 - SE process - requirements management, traceability, verification
 - Process compliance initiatives, handbooks, standards
 - Problems
 - Not lean, ad hoc practice
 - Not scalable or adaptive
 - One-size fits all
 - Expensive tools with extensive training and not lifecycle usable
 - Workforce – aging, mobile workforce, IP limits collaborative advancement
 - SE is still an approach not often implemented
- SE Enabling Technology
- Growing SE workforce development in global environments (certification, communication, education).

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It's amazing what volunteers are able to accomplish, driven by the passion for Systems Engineering!

WELCOME, NORTH STAR NEW MEMBER!

Name	Company	Title
Terry Cox	Siemens Ind. Inc.	SW Eng IV