

The Integrator

INCOSE North Star Chapter



Volume 1, Issue 1

April 2005

North Star Newsletter

North Star's First Newsletter Communication

Eileen Arnold
Editor

The North Star leadership has been discussing the desire for a newsletter for several years. A quarterly Newsletter would help raise the Chapter eligibility for a Chapter Award from Bronze to Silver, awarded at the International Symposium each year. This is the year!

Please help make The Integrator a usable source of information for you and your company needs! Contact Eileen.Arnold@incose.org to contribute articles, topic suggestions, and usable information for our members.

For the first article, it seemed appropriate to use the theme of this new newsletter; Integration.

Enjoy!

Systems Engineering at its Best!

Systems Integration – Eileen Arnold (UDLP)

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Systems Engineering:
“Bridging Industry, Government, & Academia”

Chapter Presidents Corner

Paper Delivery by Paul Frenz of General Dynamics

Paul Maggitti
GD-AIS

Paul Frenz will present the paper "The Nuts, Bolts, and Duct Tape of Establishing a System Engineering Measurement Program" at the 2005 International INCOSE Symposium in Rochester, NY. Hear Paul deliver his paper at MTS at the June 9 chapter meeting. Paul is remembered for his recent stimulating presentations at the "Panel Discussion on the Integrated Product Team (IPT)" in January and the "SE Cost Estimation Tool – COSYSMO" in March.

Now is a great time to start thinking about delivering a paper at the 2006 International INCOSE Symposium in Orlando, FL. The fall deadline looms on the horizon.

International Symposium 2005

The 2005 INCOSE International Symposium is right around the corner, Sunday through Thursday, 10-14 July 2005. Sign-up now! For more information, access <http://www.incose.org/symp2005/index.htm>.

“This symposium will broaden the scope of those involved in the concept, design, development, test, measurement, management, and improvement of product and process systems. No matter what your role in your organization -- systems engineer, program manager, integration and test, college student, technical lead, process group member, SE application vendor, academic -- IS2005 will provide you the opportunity to advance your knowledge.”

According to the INCOSE Fellows, “Systems, businesses and people must be integrated so that they interact with one another. Integration means bringing things together so they work as a whole. Interfaces between subsystems must be designed. Subsystems should be defined along natural boundaries. Subsystems should be defined to minimize the amount of information to be exchanged between the subsystems. Well-designed subsystems send finished products to other subsystems. Feedback loops around individual subsystems are easier to manage than feedback loops around interconnected subsystems. Processes of co-evolving systems also need to be integrated. The consequence of integration is a system that is built and operated using efficient processes. “

There is an increasing emphasis on “systems of systems” perspectives as the need for increased integration and interoperability is recognized. This need exists for product development as well as organization structure, supply chain management, service structure, and an almost unlimited set of other structures involving businesses and people and the enterprise environments that support them. There is a growing recognition of the important role played by systems architecting as a vital component of systems engineering, especially in the concept development phase for large and complex ventures such as interplanetary space missions, globally distributed networks, and reengineering of corporations.

The INCOSE Fellows define integration as “... the means to bring things together so they work as a whole”. “Building applies to the building of software components to create modules, hardware components to create units or subsystems, the joining of software modules to create executables, the joining of software executables and hardware subsystems to create systems. At each build stage of integration, verification is performed to ensure the requirements are met, all the while validating that the end product will be acceptable by the customer. Integration is a planned event, the detail of which is captured in a reproducible and reusable form.

INCOSE envisions development of an industry

engineering standard. This standard would provide a accepted integration standard, a high level systems means to achieve systems engineering integration across applicable commercial, government and educational domains. Specific implementation guidance must be based on the high-level systems engineering knowledge. Each domain could then develop domain specific standards to enable improvements in the engineering of their specific domain products or systems.

If you have integration expertise, consider joining or chairing an INCOSE Working Group to help lay out this standard with other organizations.

**CALENDAR OF NORTH STAR
EVENTS – SEE WEBSITE FOR
MORE INFORMATION AT
[HTTP://WWW.INCOSE.ORG/NORTH
STAR](http://www.incose.org/northstar)**

2005 CHAPTER MEETINGS

[12 MAY 2005](#)

LOCKEED MARTIN

North Star Chapter meeting: Mil-Specs to COTS and LMCO Tour

[9 June 2005](#)

MTS

INCOSE 2005 Minnesota Paper Preview

Movie – “How to Build a House in Four Hours”

[July 2005](#)

No meeting due to INCOSE 2005

[11 August 2005](#)

Summer Social – Dinner at Moscow on the Hill, St Paul
INCOSE 2005 Debrief

[8 September 2005](#)

Location - ATK

System Software Safety

[13 October 2005](#)

Boston Scientific

Verification & Validation