NEWSLETTER

Vol. 6: Issue No. 9 **November 2008**

2002, 2004-07 2003

For up-to-the-minute event details:

- *Check future editions of the Newsletter*
- *Watch your email for the Reflector*
- *Visit the INCOSE-LA website at www.incose-la.org*

UPCOMING EVENTS

November Two-Day Tutorial

DAY 1: An Introduction to the OMG Systems Modeling Language (OMG SysML™)
DAY 2: Object-Oriented Systems Engineering Method (OOSEM)
Speaker: Sanford Friedenthal
November 18-19, 8:30 a.m. to 5:30 p.m.
at Marriott Courtyard, Old Town Pasedena
Cost: Members—$230; Non-members—$250
See page 3 for more information

IMPORTANT: Chapter Officer Elections

SAVE THE DATE

❄2008 Holiday Party❄

Food, Drinks, Good Company
Plus Awards Ceremony and White Elephant Gift Exchange
December 13, 3 pm to 7 pm
At Susan Ruth's house, Whittier, CA

2009 International Workshop

January 31—February 3, 2009
San Francisco, CA

2009 INCOSE-LA Mini-Conference

Enhancing Systems Engineering:
Expanding Our Process to Meet Future Needs
February 7, 2009
at Loyola Marymount University
See page 2 for more information

March Tutorial

Lean Enablers for Systems Engineering
Speaker: Bohdan "Bo" W. Oppenheim
March 21, 2009
at Loyola Marymount University

INCOSE-LA Elections 2009: Serving Your Fellow Professionals

Election fever is in the air. Our own country will be voting for the next Commander-in-Chief. Likewise, our own INCOSE-LA Chapter will soon be asking all of you valued members to vote on its Executive Board of Directors (BoD).

In the coming weeks a special newsletter will be sent to you all to introduce you to all of the running candidates. These are the members that the Nomination and Elections Committee feel will help advance systems engineering as a profession and will continue to contribute to the success and growth of this Chapter.

Just as with the U.S. Presidential elections, all INCOSE members who are affiliated with the Los Angeles Area Chapter have the opportunity to contribute to this chapter by voting for your Board of Directors.

Please be on the lookout for your special November Election Edition Newsletter so you can get to know the candidates for the 2009 Board of Directors. You are all encouraged to vote in the yearly elections that will take place in December.

Inside This Issue

NOT A MEMBER? JOIN INCOSE!

Learn more about becoming a member by clicking on:
http://www.incose.org/membership/valueofmembership.aspx

Call for Presentations

INCOSE LOS ANGELES CHAPTER (INCOSE-LA)
2009 MINI-CONFERENCE
February 7, 2009
Loyola Marymount University (LMU), Los Angeles CA

Enhancing Systems Engineering
Expanding Our Process to Meet Future Needs
Aerospace ♦ Commercial ♦ Defense ♦ Enterprise ♦ Service

Whether we want to accept it or not, everyone does systems engineering — some formally and some unconsciously, many haphazardly. As Jorg Largent (INCOSE-LA Newsletter Editor) so nicely stated, "Every successful project does systems engineering; some of them do it deliberately, the others do it eventually."

Unconscious systems engineering can be hidden under a host of different names: business planning, business forecasting, program definition, engineering management, tradeoff studies, problem solving, etc. While each of these has its own formal methods that may be applied, systems engineering integrates them, thus attacking the challenge of effectively developing complex systems.

This mini-conference will address the application and evolution of Systems Engineering to meet current and future needs for systematic development. These needs are present not only in the traditional aerospace and defense industries, but also in the commercial and service industries. It is an opportunity for practitioners in each industry to learn from the perspectives of those in the other industries.

TRACK 1	TRACK 2	TRACK 3
Applying Systems Engineering to: Infrastructure Systems • Utilities (water, power, waste, communication) • Transportation and distribution Enterprise Systems • Service systems (non-tangible systems) • Business and finance • Health care • Social Systems How-to case studies	**Right-sizing Systems Engineering:** Partitioning the process • Agile Methods • Just-in-time • Outsourcing and Systems Engineering and Technical Assistance (SETA) Contractors Trading cost, performance, schedule, and risk • Competing drivers — customer and suppliers • Just enough (how to know when to stop) • Feasibility (technical, economic, political, aesthetic)	**Evolving Systems Engineering to address:** Soft systems • People systems • Evolving systems • Self-healing systems Systems of Systems • Service-oriented systems • Complex Adaptive Systems (CAS)

Presentations will be limited to 20-25 minutes with 10-15 minutes of questions and answers, for a total time of 35 minutes. Please send a one-page or less summary of your presentation to the Technical Chair, Richard F. Emerson (email: r.emerson@computer.org) by **November 12, 2008**. You will be notified of acceptance by **December 9, 2008**. Your final presentation is due **January 21, 2009**. When you are notified of acceptance, the presentation format will be provided. Ideally, all communications will be through email. If this is not possible, please advise immediately so that we can make arrangements to accommodate your needs. Should you have further questions, address them to Richard F. Emerson at r.emerson@computer.org.

Two-Day November Tutorial by Sanford Friedenthal:

Day 1: "An Introduction to the Object Management Group Systems Modeling Language "
Day 2: "Object-Oriented Systems Engineering Method"

Particulars

November 18 and 19, 2008, 8:30 a.m. to 5:30 p.m.
Courtyard by Marriott
180 North Fair Oaks Avenue
Pasadena, CA 91103
Cost: Members: - $230; Non-members—$250
Price is for both days and includes presentation materials, a light continental breakfast, and buffet lunch
Parking is $7 per day

NOTE: Attendance at day 1 is required to attend day 2.

November 18 Tutorial—Day 1: "An Introduction to the OMG Systems Modeling Language (OMGSysML™)"

Objectives: This introductory course should provide the student with an understanding of:

- Benefits of model-based approaches for systems engineering
- SysML diagrams and language concepts
- The role of SysML in a model-based systems engineering process

Description: The Object Management Group (OMG) Systems Modeling Language (OMGSysML™) is a general-purpose graphical modeling language for specifying, analyzing, designing, and verifying complex systems that may include hardware, software, information, personnel, procedures, and facilities. In particular, it provides graphical representations with a semantic foundation for modeling system requirements, behavior, structure, and constraints that support a broad range of engineering analysis. SysML represents a subset of UML 2.0 with extensions needed to satisfy the requirements of the UML™ for Systems Engineering RFP.

This tutorial provides an introduction to how SysML can address the needs of the systems engineer. It includes background and motivation, an overview of the SysML diagram types and language concepts, and selected sample problems to demonstrate how the language can be used as part of a typical SE process.

The SysML specification was developed in response to requirements by a diverse group of tool vendors, end users, academia, and government representatives with sponsorship from both INCOSE and the OMG. The OMGSysML™ Specification was adopted in May 2006. For more information, go to http://www.omgsysml.org/.

Prerequisites: Background in systems engineering. Exposure to UML helpful but not required.

Format: Both days will be a lecture format with class discussion.

November 19 Tutorial—Day 2: "Object-Oriented Systems Engineering Method (OOSEM)"

Objectives: This introductory course should provide the student with an understanding of:

- An overview of OOSEM activities and modeling artifacts
- Some key modeling concepts that support system specification and design.

Description: This tutorial will introduce an Object-Oriented Systems Engineering Method (OOSEM), which integrates a top-down systems approach with object-oriented concepts and modeling techniques. This method uses the extension to UML for systems engineering called the OMGSysML™. OOSEM brings to systems engineering a technique for leveraging some of the expressiveness of SysML and the advantages of OO to help architect more flexible, extensible, and upgradeable systems with new, evolving technology. Another major goal of OOSEM is ease of integration with object-oriented methods for software engineering, and integration with hardware engineering and other disciplines. The tutorial will provide an overview of the model-based method for needs analysis, requirements analysis, logical design, physical design, and supporting activities.

Prerequisites: Tutorial—Day 1 and exposure to SysML.

Reservations: RSVP by November 14 online at www.incose-la.org or by email to registration@incose-la.org (please include "INCOSE-LA November Tutorial" in subject line).

Directions:

From the Valley: Travel south on I-5 to the Ventura Freeway (134) East. Travel approximately 7.5 miles, then exit at Fair Oaks Avenue. Turn right onto Fair Oaks, and travel for one block, Courtyard and parking are on the left.

From LAX: Take Sepulveda Blvd. South to (105) Freeway East 10 miles to the Pasadena Freeway (110) going North. Exit Fair Oaks Avenue, make a left. Travel approximately 5 miles. Courtyard and parking are on the right, 1 1/2 blocks north of Colorado Blvd.

From Long Beach: Take the 405 Freeway North to the Pasadena Freeway (110) freeway going North. Travel approximately 5 miles. Courtyard and parking are on the right, 1 1/2 blocks north of Colorado Blvd.

Allow at least 1.5 to 2 hours travel time from LAX or Long Beach.

Additional venue information is located at: http://www.marriott.com/hotels/travel/laxot-courtyard-los-angeles-pasadena-old-town/

About Sanford Friedenthal, Principal Systems Engineer, Lockheed Martin

Sanford leads an effort to enable model-based systems development across Lockheed Martin in support of the Corporate Systems and Software Initiative. His experience includes the system life cycle from conceptual design through development and production on a broad range of systems. He has been a systems engineering department manager and a lead developer of advanced systems engineering processes and methods including the Lockheed Martin Integrated Enterprise Process and the OOSEM. Mr. Friedenthal also was a leader of the Industry Standards effort through the OMG and INCOSE to develop the Systems Modeling Language OMG SysML ™ that was adopted by the OMG in 2006, and he is co-author of *A Practical Guide to SysML*.

WANTED:
ROBOT EXPERTS AND ENTHUSI-

INCOSE-LA is seeking systems engineers who would be willing to help a local Southern California high school participate in the For Inspiration and Recognition of Science and Technology (FIRST) Robotics Competition. There are currently more than 60 high schools in the Los Angeles area that have robotics teams. Ric Roberts and his team at Raytheon would like your help in supporting these teams.

The FIRST Robotics Competition is a national engineering contest which immerses high school students in the exciting world of engineering. Teaming up with engineers from businesses and universities, students get a hands-on, inside look at the engineering profession.

> ***FIRST Vision***
> *"To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology heroes."*
> *— Dean Kamen, founder*

In six intense weeks, students and engineers work together to brainstorm, design, construct and test their "champion robot." The teams then compete in a spirited, no-holds-barred tournament complete with referees, cheerleaders, and time clocks.

The partnerships developed between schools, businesses, and universities provide an exchange of resources and talent by highlighting mutual needs, building cooperation, and exposing students to new career choices. The result is a fun, exciting, and stimulating environment in which all participants discover the important connection between classroom lessons and real world applications.

Each year, the competition is different, so returning teams will always look forward to a new challenge. The details of the challenge will be kept secret until the unveiling at a Kick-Off workshop in January. The revelation of the details provides a high level of excitement as everyone sees the new challenge for the first time.

After observing and participating in many of the competitions over the years, Roberts continues to see very elegant solutions to the wrong problem. This specific observation lends itself to a golden opportunity for systems engineers to help students learn a tenet of the systems engineering process: understand the problem before beginning to develop the solution.

If you would like to learn more about FIRST, please go to their website at www.usfirst.org.

Are you interested in working with a FIRST Robotics team? Contact Ric Roberts at rtroberts@raytheon.com or 310.616.1356 .

INCOSE-LA MAKING A DIFFERENCE:
Community Service Day at the LA Regional Foodbank
by Elizabeth Deems

On Saturday, October 18, INCOSE-LA brought together 26 volunteers from all over the Southern California region to donate their time at the LA Regional Foodbank. Volunteers came from the INCOSE membership, as well as additional employees of Raytheon, Boeing, and JPL and their family members. The group, teamed with a group of young insurance executives, spent the morning assembling food kits that are distributed in LA County. In the span of three hours, the team filled 965 crates of food that will be given to those in need in our community.

The LA Regional Foodbank is a nonprofit charitable organization that has been serving the disadvantaged for 35 years. They are at the heart of a charitable food distribution network that includes nearly 900 charitable agency sites in Los Angeles County. These food packages include canned fruit, canned vegetables, rice, cereal, and other non-perishable food items from their USDA food commodities donations.

Team INCOSE-LA: By giving just a little of their time, they made a big difference in the local community!

The Board of Directors wishes to welcome the following new members in the Los Angeles Chapter of INCOSE:

Note: The information listed below is from the member directory and is based upon your initial membership application. If the information is not correct or complete, then please access the member directory (at www.incose.org) to update your information.

Name	Title	Company
Sanda Mandutianu		Jet Propulsion Laboratory
Henry Stone	Laboratory Supervisor	Jet Propulsion Laboratory
Peter Pao	Adjunct Professor	UCLA
Martin Lopez	L.A. Site Director	Overlook Systems Technologies

Online Tutorial: Prepare for the Systems Engineering Certification

November 6, 2008 through March 2009

Presented by John O. Clark

Interested in receiving your INCOSE Systems Engineering (SE) certification? Northrop Grumman Corporation (NGC) is hosting an online tutorial to help you prepare for the SE certification exam. The tutorial is taught by John O. Clark, Chief Engineer at the NGC Mission Systems Sector and Director of Education and Training for the INCOSE Hampton Roads Area Chapter.

The tutorial covers the Certified Systems Engineering Professional (CSEP) process and the SE Handbook version 3.1 (the basis for the CSEP exam). It also provides tips on filling out your application.

Beginning Thursday, November 6 and running through March 2009, the online tutorial consists of 15 weekly sessions, held from noon to 1:30 p.m., Eastern Time USA, for up to 250 participants. Prior to each session, participants are encouraged to read the sections and appendices of the handbook to be presented. Course materials include the tutorial slides (including PowerPoint Notes), sample questions, and prior-session audio recordings. The current schedule, including the specific session, section/appendix, and topic is available at https://connect.incose.org/tut/sehandbook/default.aspx. Those interested in attending the course should check the website for any schedule changes that may occur.

Interested in receiving your INCOSE Systems Engineering Certification?

Registration is **not** required for NGC current employees, INCOSE Corporate Advisory Board (CAB) member organization current employees, or INCOSE registrants who paid for a past course. People who fall into those categories can just join in. *Registration **is** required for all other INCOSE members.*

At no cost, **NGC current employees** can access the course, all course materials, teleconference number, and meeting password at \\rsmv48-eprocess\epi\Training\Course-Data. Upon logging in for the first time, they must use their NGC username and password and run a test meeting, After running the test meeting, they may attend the meeting and enter the meeting password. As this tutorial is considered an external training event, employees will need to follow their export policies and procedures in order to attend this event.

INCOSE CAB member organization current employees can access the course at no cost by using their CAB organization's INCOSE Connect username and password to access the tutorial site at https://connect.incose.org/tut/sehandbook/default.aspx. CAB member employees have full access to all INCOSE products, including this course, even if they personally are not INCOSE members. Their CAB organization's INCOSE Connect username and password can be obtained by contacting their organization's INCOSE CAB member representative listed at http://www.incose.org/about/organization/cab.cfm.

INCOSE registrants who paid for a past course can still access this course at no cost by accessing https://connect.incose.org/tut/sehandbook/default.aspx using their INCOSE Connect username and password.

All other INCOSE members are required to register and pay a minimal fee of $100 per new registrant to cover expenses. This registration will be handled on a first-come, first-served basis using an online registration site at http://www.acteva.com/booking.cfm?bevaid=168692 to obtain course access.

Please note that you must be a NGC current employee, a CAB member organization current employee, or an INCOSE member to participate in this tutorial. Contact john.clark@incose.org if additional information is needed.

The following is a current class schedule with scheduled course topics. Check for any schedule changes at: https://connect.incose.org/tut/sehandbook/default.aspx.

Session	Date	Section and Topic
1	11/6/08	Tutorial Introduction, Certification of SEs
2	11/13/08	1—Scope, 2—SE Overview, Appendix A—SLCP N2 Chart
3	11/20/08	3—Generic Life Cycle Stages, 4.0-4.4—Technical Processes
4	12/4/08	4.5-4.12—Technical Processes (cont.)
5	12/11/08	5.0—Project Processes, 6.0—Enterprise and Agreement Processes, 7.0-7.1—Enabling SE Process Activities
6	12/18/08	7.2-7.3—Enabling SE Process Activities (cont.)
7	1/8/09	8—SE Support Activities
8	1/15/09	9—Specialty Engineering Activities
9	1/22/09	10—Tailoring Overview, Appendices A, D, E, F
10	1/29/09	G—SE Technical Management, H—IPPD
11	2/5/09	I—Requirements Definition Process
12	2/12/09	J—Functional Analysis and Allocation, K—System Architecture Synthesis
13	2/19/09	L—Systems Engineering Analysis Activities, M—Human Systems Integration
14	2/26/09	N—System Integration, Certification of SEs (repeat of Session 1)
15	3/12/09	Certification Application Help (including John Clark's CSEP and CAR Application)
reserved	3/19/09	Extra class, if needed

No classes are scheduled for 11/27/08, 12/25/08, 1/1/09, and 3/5/09 due to holidays or other scheduled events.

INCOSE-LA Chapter NEWSLETTER

Vol. 6: Issue No. 9 November 2008

Return Address:

800 S. Pacific Coast Hwy. #8-205
Redondo Beach, CA 90277

Forwarding Address Requested

hThe International Council on Systems Engineering (INCOSE) is an organization formed for the purpose of advancing the art and science of systems engineering in various areas of the public and private sectors. The Los Angeles Chapter meets several times per year for dinner meetings, and additionally sponsors tutorials and other activities of interest to those in the systems engineering field or related fields. L. A. Chapter officers are as follows:

2008 Board of Directors and Appointed Positions

Elected Officers				
President:	John David Boyd	john.boyd@incose.org	or	president@incose-la.org
Vice-President:	Eric Belle	eric_c_belle@raytheon.com	or	vicepresident@incose-la.org
Past President:	James Manson III	james.manson@incose.org	or	pastpresident@incose-la.org
Secretary:	Beth O'Donnell	elizabeth.l.o'donnell@boeing.com	or	secretary@incose-la.org
Treasurer:	Marsha Weiskopf	marsha.weiskopf@aero.org	or	treasurer@incose-la.org
Elected At-Large Directors				
Membership:	Paul Cudney	paul.cudney@incose.org	or	membership@incose-la.org
Programs/Speakers:	Jack Elson	jelson@nu.edu	or	programs@incose-la.org
Tutorials/Education:	Shirley Tseng	shirleytseng@earthlink.net	or	setraining@incose-la.org
Ways and Means:	Dana Pugh	dana.pugh@incose.org	or	waysandmeans@incose-la.org
Communications:	OPEN			
Appointed Positions				
Newsletter co-editors:	Edie Ung, Jorg Largent	edie@raytheon.com	or	Palmdalejorg@aol.com
Newsletter Production Manager:	Lee-Ann Seeling	lseeling@imsco.us.com		
Reflector Manager:	Susan Ruth	susan.c.ruth@aero.org		
Industrial Relations Manager:	Jose Garcia, Jr.	jose.s.garcia-jr@boeing.com		
Technical Society Liaison:	Edmund Conrow	info@risk-services.com		
Chapter Recognition Manager:	Michael Maar	michael.c.maar@boeing.com		
Lead Site Coordinator:	Anna Warner	anna.warner@boeing.com		
Webcast Event Manager:	Chris Delp	cldelp@jpl.nasa.gov		
Website Content Manager:	Communications Director			
Website Technical Manager:	Benjamin Luong	Benjamin.Q.Luong@boeing.com		
2009 Mini-Conference Chair:	Shah Selbe	shah.selbe@boeing.com		
2009 Mini-Conference Technical Program Chair:	Dick Emerson	r.emerson@computer.org		
Venue Chair:	Denise Nelson	Denise.J.Nelson@boeing.com		
Representative to San Fernando Valley Engineers' Council:	Stephen Guine	Stephen.Guine@ngc.com		

Those interested in INCOSE membership please contact Paul Cudney - paul.cudney@incose.org. If you wish to be placed on our E-mail distribution, please contact Susan Ruth – susan.c.ruth@aero.org.