NEWSLETTER

INCOSE LOS ANGELES CHAPTER
LOS ANGELES

Gold Circle Award
2002, 2004-08

Silver Circle Award
2003

2008 President's Award for Most Outstanding Chapter

INCOSE
International Council on Systems Engineering

UPCOMING EVENTS

March Tutorial
Introduction to Software and Service-Oriented Architecture
Dr. Steven P. Fonseca
WHEN: March 26-27, 2010
See page 2 for more information
Additional detailed information will be available in the March *Newsletter* and in a forthcoming *Reflector* notice.

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

January Networking Meeting
by Nehal Patel

The INCOSE-LA Professional Networking Event hosted by the Los Angeles Chapter and organized by Nehal Patel was held on Wednesday, January 13, at McCormick & Schmick's restaurant in El Segundo. Members of the INCOSE-LA Board of Directors were in attendance along with a number of Chapter members who live or work in the Los Angeles area. Some of our newest members also participated in this event. All were quickly engaged in conversation, and an enjoyable time was had by all.

Ideas were discussed on how we can continue to appeal to systems engineers throughout the Los Angeles metropolitan area and to those who work in industries where the term "systems engineer" is not widely utilized but many of the practices are. The Chapter will continue to reach out to the membership with these informal gatherings and looks forward to engaging new members in our Chapter's activities. The Chapter is planning the next Professional Networking Event in the Pasadena area.

As they become available, more details will be made available in future editions of the *Newsletter*, on the Chapter website at www.incose-la.org, and via our Chapter *Reflector* email. Members with questions or comments can send an email to Nehal Patel (nehal_p1_patel@raytheon.com).

Thank you for supporting the Los Angeles Chapter of INCOSE!

SPACEX Visit

The November 2009 speaker meeting (photograph at left) was hosted by SpaceX of Hawthorne and was preceded by a tour of the SpaceX vehicle design, manufacture, and integration facility. SpaceX is developing launch vehicles that are intended to reduce the cost and to increase the reliability of space access for the emerging market of private and commercial space transport.

The tour was followed by a presentation by Mr. Chris Bauer, the Sales Director for SpaceX.

March Tutorial
Introduction to Software and Service-Oriented Architecture
Dr. Steven P. Fonseca

ABSTRACT: The service-oriented architecture (SOA) style is the result of information technology best practices evolving to achieve highly-valued, system-quality attributes, including flexibility to respond quickly to changing business requirements, reusability to leverage software capabilities across the enterprise for cost avoidance, maintainability to reduce total cost of ownership, and interoperability to integrate software across technical silos for added business value. SOA codifies many of its best practices in the definition of complementary and integrated processes, information, and software architectures. These architectures are fundamental to a successful SOA initiative and more broadly, are illustrative of the role that architecture plays in modern, large-scale software development. Using the SOA style as a case study, the first day of this tutorial provides instruction on how to create a set of interrelated architecture definitions that can serve as the foundation for architecture-driven software development. The second day of instructions covers best practices for achieving interoperability, including enterprise-integration design patterns and techniques for governing communication.

TARGET AUDIENCE: The course is primarily for senior system software engineers and architects that have or will have significant design responsibilities. Managers with technical backgrounds will find the course useful for understanding modern approaches in software design. In addition, SOA should be of interest to a large base of systems engineers in any enterprise.

INSTRUCTOR BIOGRAPHY: Dr. Fonseca is a chief software architect with 12 years of experience helping organizations achieve state-of-the practice results for software development with a focus on distributed systems middleware and applications in mission-critical and applied R&D contexts. He has held positions at the Jet Propulsion Laboratory, Hewlett Packard Labs, British Telecommunications Labs, Intel, and NASA Ames Research Center. His technical interests include service-oriented architecture, ontologically-based information systems, enterprise-class middleware, the dynamics of organizational change, and R&D technology transfer. Steven completed his Ph.D. in Computer Science from UC Santa Cruz in collaboration with HP Labs. Steven completed an M.S. in Computer Science from UC Santa Cruz and a Bachelor of Science in Computer Engineering from UC Davis. He is currently pursuing an M.B.A. at UCLA.

WHERE: Aerospace Corporation, El Segundo, California
COST: INCOSE members, $175; non-members, $225 (includes continental breakfast and lunch)
WHEN: March 26-27, 2010, 8:30 a.m. to 5:00 p.m.
REGISTRATION: The final details of this tutorial will be published in the next *Newsletter* and in a *Reflector* notice.

Language the Program
By Jorg Largent with inputs from James R. van Gaasbeek

INCOSE Fellow Jack Ring has been cited as a source of some insight into the challenge. An observation attributed to Mr. Ring is that he has, on several occasions, defined the systems engineer's job as:

1. Language the program
2. Define the problem
3. Drive the development effort to a balanced solution
4. Show the customer that what you delivered is what he or she thought he or she was buying.

The first item is critical to reduce the confusion and babble when you have a multi-part customer (joint programs) and numerous other stakeholders. It is also critical within the contractor community. Remember also that he who defines the terms of the argument controls the argument. Words have meaning, and it helps to have a common understanding.

One of the INCOSE working groups, focusing on how best to support a particular industry, is addressing the "language the program" challenge and is developing an answer tailored to the needs of that industry. An inquiry for suggestions from outside that industry's community prompted a response with two points of note:

1. Rather than looking to other systems engineers to develop the message, perhaps soliciting the input from those in the community will yield a more compelling one.
2. In order to be understood, the message needs to be in the language of the customer. The message should be based on his or her needs and crafted in their terminology.

Very little, if any, scientific data-gathering and analysis are needed to recognize the vulnerability any activity involving two or more people has to misunderstanding due to a lack of mutual understanding at the onset. The relationship is axiomatic. Given that "language the program" is important as the first step in communicating the systems engineering process, the question becomes, "What does it look like?"

- The message should be crafted in the language of the project.
- The language should facilitate defining the problem, driving the development effort to a balanced solution, and managing customer expectations.

So while the importance of "language the problem" is axiomatic, the discussion above provides no clear definition of the qualifications of a systems engineer to meet the challenge, nor does it include any metrics to measure the challenge. For example: Would one metric be that only those immersed in the community convey the systems engineering message in the language of the project? And if so, how would a systems engineer qualify for the role on a complex project involving multiple communities (manufacturing facilities, operational facilities, training of producers, users and maintainers, operations, maintenance, et al).

The discussion above is not comprehensive. Rather it is intended to provide a snapshot of one of the challenges faced by those of us in the systems engineering profession. Comments and differing perspectives are welcome. Please send your comments to Jorg Largent at jorg.largent@incose.org.

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
Brian Zimmerman	Sr. Associate	Booz Allen Hamilton
Edward Dou	Student	USC
Leonard Brownlow	Associate	Booz Allen Hamilton
William Wildman	Associate	Defense
James Brownfield	President	Radical System Solutions, Inc.
Ben Juricek	Senior Analyst	Toyon Research
Krishnakumar Beta	Principal Consultant	Oracle
Dan Hegeman	Multi-Disciplinary Engineer II	Thales Raytheon System
Andrew Hawkins		The Boeing Company

The International Council on Systems Engineering (INCOSE) is a not-for-profit membership organization founded in 1990. Our mission is to advance the state of the art and practice of systems engineering in industry, academia, and government by promoting interdisciplinary, scalable approaches to produce technologically appropriate solutions that meet societal needs.

The Los Angeles Chapter (INCOSE-LA) meets several times per year for dinner meetings and speaker meetings, affording systems engineering professionals an opportunity to network and to strengthen their skills. In addition, the Chapter sponsors tutorials, conferences, and other activities of interest to those in the systems engineering field or related fields. Chapter officers are as follows:

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2010 Board of Directors and Appointed Positions

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Elected Officers

President:	Rosalind Lewis	rosalind.lewis@aero.org	or	president@incose-la.org
Vice-President	Beth O'Donnell	elizabeth.l.o'donnell@boeing.com	or	vicepresident@incose-la.org
Past President	Eric Belle	eric_c_belle@raytheon.com	or	pastpresident@incose-la.org
Secretary	Josh Sparber	joshua.sparber@dcma.mil	or	secretary@incose-la.org
Treasurer	Marsha Weiskopf	Marsha.V.Weiskopf@aero.com	or	treasurer@incose-la.org
Membership:	Paul Cudney	paul.cudney@incose.org	or	membership@incose-la.org
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Tutorials/Education:	Shirley Tseng	shirleytseng@earthlink.net	or	setraining@incose-la.org
Ways and Means:	Shah Shelbe	shah.selbe@boeing.com	or	waysandmeans@incose-la.org
Communications:	Edie Ung	ma1teez@yahoo.com	or	communications@incose-la.org

Appointed Positions

Newsletter Co-editors:	Edie Ung, Jorg Largent	ma1teez@yahoo.com	or	jorg.largent@incose.org
Newsletter Production Manager:	Lee-Ann Seeling	Lee-Ann.S.Seeling@raytheon.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 Technical Manager	Benjamin Luong	Benjamin.Q.Luong@boeing.com		
Venue Chair	Shah Shelbe	shah.selbe@boeing.com		
Representative to San Fernando Valley Engineers' Council	Stephen Guine	Stephen.Guine@ngc.com		
Professional Networking Manager	Nehal Patel	Nehal_P1_Patel@raytheon.com		

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

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Forwarding Address Requested