UPCOMING EVENTS

Tuesday, September 18 Speaker Meeting
“Combined Modeling and Requirements Analysis”

Jeff O. Grady, INCOSE Fellow
President, JOG System Engineering, Inc

Location
Jet Propulsion Laboratory (JPL)
4800 Oak Grove Drive
Pasadena, CA 91109

Networking 5:30 pm
Presentation 6:30 pm

Friday, September 18 Tutorial
“Combined Modeling and Requirements Analysis”

Jeff O. Grady, INCOSE Fellow
President, JOG System Engineering, Inc

Location
California Institute of Technology
Beckman Laboratory, Bldg. 76, Rm. BBB-24
1200 E. California Blvd
Pasadena, CA 91126

7:30 am – Registration, check-in, Coffee
8:15a.m. – Noon – Tutorial with mid-morning break
Noon – 1:30p.m. – Lunch (not included or provided by INCOSE)
1:30 p.m. – 4:45 – tutorial with mid-afternoon break

October Speaker Meeting
Tentatively set for first week of the month, topic, speaker and location to be announced

November Speaker Meeting and Tutorial
Tentatively set for first or second week of the month, topics, speakers and locations to be announced

INCOSE-LA Holiday Party
December 2007, date and location to be announced

ABSTRACT: Jeff Grady will make the proposal that system engineers and software engineers join forces to adopt or evolve a combined modeling capability that all can use to clearly understand a problem space, publish specifications containing the requirements derived from those models, and link up traceability across the HW-SW valley. The modeling artifacts are available today based on the tremendous work accomplished by system and software engineers within the OMG to encourage this combined model but there are some impediments that may make it difficult to gain acceptance in the system engineering community. Jeff will outline the proposed combined model composed of UML, SysML, and four artifacts pulled from traditional structured analysis, identify the problems in closing in on a combined model, and challenge our members to engage their minds to think about, interact within other engineers in their enterprise and INCOSE to resolve the modeling dilemma and move their own capability and understanding toward mastery.

BIOGRAPHY: Jeff Grady has been the President of JOG System Engineering, Inc., a system engineering consulting firm focused on assessment of current client capability coupled with education leading to planned improvements since 1993. Formerly, engineering manager of Systems Development at General Dynamics Space Systems Division working on space transport and energy systems. Other experience over a period of 30 years in industry included: system engineer with
Jeff is a charter member of the International Council on Systems Engineering (INCOSE). He was recognized by his peers as an INCOSE Fellow in 2001, cited for "industrial education in the systems engineering field and for establishing the role of INCOSE as a teaching organization." He was selected as an INCOSE Founder in 2003, cited for "his seminal role in founding INCOSE, his service as its Secretary, his leadership in inaugurating and editing the Systems Engineering Journal, and his major contributions to systems engineering education." Jeff is also recognized as an INCOSE CSEP.

His system engineering knowledge has been thoroughly tested as a lecturer and published author. Over a period of 13 years Jeff has developed and presented several hundred system engineering courses and tutorials through universities, short course companies, and by direct sale to companies, in some cases building special courses for ownership by clients such as FAA and Raytheon among others. His company's program undergoes continuous improvement based on experience dealing with clients as a consultant, new research, and critical feedback from clients. After recent consulting experience, for example, with a client using UML in the development of new Army vehicles, he made significant improvements in his requirements course relative to HW-SW integration.

Jeff is currently a member of the Purdue University Graduate Faculty. He has lectured in systems engineering programs at or for University of California San Diego, Riverside, Berkeley, and Irvine; Indiana-Purdue University; University of Alabama at Huntsville; John Hopkins University, and Old Dominion University. He has also lectured nationally and internationally on-site at companies. Member of the UCSD System Engineering Advisory Board and continues to teach system engineering courses there. He has also taught many system engineering courses for short course companies including Applied Technology Institute, Technology Training Corporation, Execuspec, and Professional Education International.


Jeff holds a Bachelor's degree in Mathematics from San Diego State University and an MS in Systems Management from University of Southern California.

RESERVATIONS: You must RSVP by Sept. 14, 5:00pm via the INCOSE-LA website (www.incose-la.org) OR to Paul Su (registration@incose-la.org, 310-336-3602) and provide the following information: name, affiliation, email address, and phone number.

DIRECTIONS TO JPL
From the INLAND EMPIRE, head West on the I-210 FWY into Pasadena and merge/exit onto the 210 FWY North (aka West) toward San Fernando. Follow the "210 FWY ALL" directions below.

From WEST LA, head EAST on the I-101/134 FWY toward Glendale, merge onto the 2 FWY North, then get on the 210 FWY (South aka East) toward Pasadena. Follow the "210 FWY ALL" directions below.

From LONG BEACH, head NORTH on the I-710 FWY, take the exit CA-60 FWY West toward Downtown Los Angeles, merge onto I-5 North toward San Fernando/Glendale/Burbank, merge onto the 2 FWY North toward La Canada/Montrose/La Crescenta - do not take CA134/1-210 East exit but continue North on CA-2 and then exit onto the 210 FWY (South aka East) toward La Canada/Pasadena. Follow the "210 FWY ALL" directions below.

210 FWY ALL: From the 210 FWY toward La Canada, take the Berkshire/Oak Grove exit (there are signs for JPL), go east, turn left on Oak Grove and follow Oak Grove until you enter the JPL complex. Park in visitor parking on your left, just before the guard gate. Cross the street and go back down the sidewalk to the von Karman auditorium.

SPEAKER MEETING WEBCAST INFORMATION
Remote sites will be available for receiving the presentation via live webcasts. RSVP Required by August 3 via the INCOSE-LA website (www.incose-la.org <http://www.incose-la.org/> ) or to Paul Su (registration@incose-la.org, 310-336-3602). Typical remote locations have included one or more of the following sites (check website for current participating locations):

- Palmdale - Aero Institute - Open Site
- Palmdale - Lockheed and Northrop - Employees only
- Woodland Hills - Northrop Grumman - Employees only
- Irvine - UC Irvine - Open Site
- Sylmar - St. Jude Medical - Employees only
- Long Beach - Boeing - Employees only
- Huntington Beach - Boeing - Employees only
- Pasadena - JPL - Open Site

Friday, September 21 Tutorial

“Combined Modeling and Requirements Analysis”

Jeff O. Grady, INCOSE Fellow
President, JOG System Engineering, Inc
A combined software and hardware development process will be offered that respects Sullivan's form follows function notion and applies a top down development orientation. The same transform between functional/behavioral and product entity planes is coordinated across hardware and software so as to encourage improved hardware-software integration.

A single specification standard is offered that marries the use case specification to the SRS format for those programs that require published specifications. The case is also made for the alternative where the requirements are accepted as residing within the model as it is extended to develop the design solution that will be compliant due to the continuity of the model. However, there are doubters about such a major change in the system development process. The tutorial will close out on the potential for model-driven development closing this door eventually.

**ABSTRACT:** Jeff Grady will make the proposal that system engineers and software engineers join forces to adopt or evolve a combined modeling capability that all can use to clearly understand a problem space, publish specifications containing the requirements derived from those models, and link up traceability across the HW-SW valley. The modeling artifacts are available today based on the tremendous work accomplished by system and software engineers within the OMG to encourage this combined model but there are some impediments that may make it difficult to gain acceptance in the system engineering community.

In this tutorial, the details of the combined modeling approach will be covered in accordance with the following six-hour outline:

1. Introduction
2. Traditional Structured Analysis Overview
3. UML Overview
4. SysML Overview
5. A Combined Specification Format
6. A combined Process Description and a Future Devoid of Paper Specifications

The fundamentals of the combined modeling approach include the union of UML and SysML extended to include the specialty engineering scoping matrix to provide discipline for software QAW exercises as well as system and hardware requirements analysis, the three-tiered environmental requirements analysis construct, a common requirements analysis sheet (RAS) as the transform between functional and/or behavioral and product entities planes and capture all requirements that are derived from the modeling work, and a common product entity structure into which product entities flow whether they are identified in response to the application of SysML or UML techniques.
The Board and Officers wish to welcome the following new members in the Los Angeles Chapter of INCOSE:

Note: The information listed below is pulled 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.

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Company</th>
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<tr>
<td>Walter Wilson</td>
<td>Software Engineer Staff</td>
<td>Lockheed Martin</td>
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<tr>
<td>Robert Matigan</td>
<td>Systems Test Engineer</td>
<td>Northrop Grumman Corporation</td>
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<tr>
<td>Thomas Chan</td>
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<td>The Boeing Company</td>
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Call for Papers
Sixth Annual Conference on Systems Engineering Research
April 4-5, 2008  Los Angeles, California
Crowne Plaza Hotel, Redondo Beach
http://www.incose-la.org/cser2008/

Topics
We invite original research papers addressing the conception, design and architecting, development, modeling and simulating, production, operation and support of these systems; definition of metrics of performance, and improvement methods; assessment and mitigation of risks; definition of critical success factors, and best practices. The refereed research papers at the conference will be complemented with invited talks. Abstracts are invited in the following broad areas:
- Ultra large-scale Systems Engineering
- Agile Systems Engineering, Development, Integration and Deployment
- Context-aware, Secure Net centric Systems
- Robust and Sustainable System Designs and Architectures
- Integrated Systems and Software Engineering and Development
- Application of Systems Engineering to the Extended Enterprise
- Virtual Collaborative Engineering Environments and Organizations
- Systems Architecting and Architecture Tradeoff Analysis
- Cognitive Engineering and Human-Systems Integration

Abstracts
Abstracts must include:
1. A Title
2. Full Author Name and Affiliations
3. Complete Address for the Corresponding Author

Doctoral candidates pursuing systems engineering related research are specially encouraged to submit abstracts. One technical track at the CSER’08 will be devoted to papers by doctoral candidates.

Please submit your abstract electronically in Microsoft Word (not to exceed 600 words) to:

Dr. Azad Madni, Chair, Conference Technical Program
Chief Executive Officer
Intelligent Systems Technology, Inc.
Santa Monica, California  90405
Tel: 310-581-5440 x144;  cserv08@IntesSysTech.com

Milestones
Abstract submission: Nov. 1, 2007
Acceptance notification: Jan. 3, 2008
The 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:

2007 Officers and Board

President: James Manson III  james.a.manson-iii@boeing.com or  president@incose-la.org
Vice-President: John "David" Boyd  john.boyd@incose.org or  vicepresident@incose-la.org
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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.