



San Diego Chapter
P.O. Box 262055
San Diego, CA 92196-2055

The INCOSE San Diego Chapter will hold its next membership meeting on Monday, **April 26, 2010**. This will be a free dinner meeting for INCOSE members and their guests.

TIME:

5:30 PM – 6:00 PM Sign-in and Networking/Dinner
6:00 PM Speaker Presentation
7:00 PM Adjourn

LOCATION:

Cocoa's Bakery, 13464 Poway Road, Poway, CA 92064
(858) 748-6118

SPEAKER:

Mark Halverson, Vice President – Chapter Development, INCOSE San Diego Chapter and Systems Engineer, Northrop Grumman Corporation

TOPIC: *Integration of COTS: Curse or Blessing?* In today's modern systems, the use of commercial off-the-shelf (COTS) systems is ubiquitous and growing. The use of COTS offers many potential advantages, such as a reduction of development costs, shorter schedules, and a reduction of risk due to using proven hardware and/or software. However, experience has shown that there are many hazards in the application of COTS to complex systems, and indeed, things typically go wrong (or at least go nowhere near as smoothly as expected). From a systems engineering point of view, there is little literature on the subject of integrating COTS into a complex system design, and in fact, very few companies have COTS-related processes for systems engineers. This presentation examines the hazards of using COTS in the context of complex system design and proposes an outline for a risk-based systems engineering process for dealing with COTS that is integrated into the overall complex system design process, and is able to handle varying degrees of COTS involvement.

ABOUT THE SPEAKER: Mark Halverson has over 30 years of systems engineering experience in the aerospace industry, coupled with management responsibilities in several positions of increasing responsibility. He has a global vision, international experience, and multi-cultural expertise. His strong background in aviation and space applications, along with strong backgrounds in complex systems, electronics, communication, EMC, integration and test, safety, reliability, and quality management systems makes him a uniquely qualified systems engineer. Mark graduated from the University of Michigan (Ann Arbor) with a BSEE and a MS in Computer, Information, and Control Systems Engineering. He has recent certificates as a Professional Systems Engineer (UCSD), Certified Quality Engineer (ASQ), and Certified Quality Manager (ASQ). Mark is currently Airworthiness Certification Manager and employed by Northrop Grumman, Aerospace Systems. In his spare time he is a private pilot, a docent on the USS Midway Aircraft Carrier Museum, and a docent at Japanese Friendship Garden, Balboa Park. Mark has served on the San Diego Chapter INCOSE Board of Directors since 2003 and is an active member in the American Society for Quality.

RSVP To: Joyce D. Williams at joycedwilliams@sbcglobal.net by **Friday, April 23rd**. This meeting is open to both members and non-members. **Bring a friend or colleague!**