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Chesapeake Chapter INCOSE

International Council on Systems Engineering

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Vol. 1 Issue

May 2010 E-Newsletter

Dinner Meeting - Wednesday 19 May 2010 Risk Profile for NASA's Crew Exploitation Vehicle

Dr. Paul Mahata

<u>Presentation</u>: This presentation provides the process used to develop the risk profile and the results for the Crew Exploration Vehicle (CEV), NASA's replacement for the Space Shuttle with capability to travel beyond low-Earth orbit and the Moon. Since many major systems must interact successfully for a launch and exploration, the CEV is considered a System of Systems (SoS) by NASA. The work was performed through the Center for Systems Management, and sponsored by: The Academy of Program/Project and Engineering Leadership (APPEL), and The Office of Chief Engineer, NASA HQ.

<u>Meal:</u> Pan Seared Tilapia Filet; Mango avocado Salsa and Cilantro rice

<u>Reservations:</u> By website: Credit card via PayPal, go to our >> <u>Events Page << or By email:</u> Contact Don York at <u>donald.york@tasc.com</u>

For details on the presentation, more about the speaker, cost details, cancellations, and directions >> please download this month's flyer HERE<<

Presentation ONLY: FREE (no reservations necessary)

The purpose of the Chesapeake Chapter is to foster the definition, understanding, and practice of world class systems engineering in industry, academia, and government. In light of that goal, every month at our dinner meeting we have a drawing for the latest in Systems Engineering literature. So come on out for a chance to win.

This month's door prize is:



May 2010						
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23	24	25	26	27	28	29
30	31					

Table of Contents

- Next Dinner Meeting
- Get to know...Our new Secretary: Mr.
 Bob Berkovits
- Last Month's Meeting
- Chapter News
- Feature Article: SE in the IT Trenches
- A Word from our President

This is the monthly newsletter for INCOSE Chesapeake, a local chapter of INCOSE International. We are a not-for-profit organization dedicated to providing a forum for professionals practicing the art and science of Systems Engineering in the Northern & Central Maryland & Southern Pennsylvania area.

Transforming Performance Measurement: Rethinking the Way We Measure and Drive Orgn Success,

by Dean R. Spitzer

Get to Know ...

Our new Secretary: Mr. Bob Berkovits



Mr. Berkovits has more than 40 years experience as a Systems and Electrical Engineer. He is currently employed by Northrop Grumman's Electronic Systems Division in Linthicum, MD, as a Senor Electromagnetic Environmental Effects (E3/EMC) Engineer. Project responsibilities have included systems requirements, hardware design, and testing of land, sea and airborne radar and ESM systems. He has

worked on various design, analysis and testing aspects of the A-10, EA-6B, A6, EF-111 and F-14D aircraft. In addition to his INCOSE participation, Mr. Berkovits serves on several IEEE committees and is the chair of the IEEE EMC society in Baltimore. He graduated from the University of Pennsylvania with a BSEE, took graduate courses at Penn, and obtained a MS in Systems Engineering at Boston University. He has completed further graduate courses in Clinical Engineering, Biostatistics, Epidemiology and Safety Engineering. His current interests are primarily in EMC and he has attended recent courses in Systems Engineering and Risk Management.

Learn even more about the other Board Members in the \underline{About} section of our new improved Website.

Did You Miss Last Month?

Mr. Gantzer declares -- "Systems Engineering is now recognized in law."



The presentation entitled "Focus of DoD's AT&L Systems Engineering Office in the Area of SE Standards and Guides" was provided by Donald J. Gantzer, Senior Systems Engineer DDR&E/SE Mission Assurance SE Support Office [SESO-SAIC], at the INCOSE Chesapeake Chapter's April 21 Dinner/Meeting. Mr. Gantzer was explaining the recent radical changes to DoD Policy when it comes to Systems Engineering and Defense Acquisition Management System. The audience was very involved as they peppered Mr. Gantzer with questions and statements on the ramifications of the changes, especially on

the mandatory requirement of "competitive prototypes."



Mark your Calendars:

Date: 16 June 2010

<u>Presentation</u>: Real-world Systems Engineering - The Lunar Reconnaissance Orbiter

Speaker: Mr. David F. Everett,

NASA

>>download June flyer HERE<<

<u>Presentation</u>: Architecture Design, Simulation and Visualization Using SysML) Speaker: Gundars Osvalds

>>download July flyer HERE<<

The Chesapeake Chapter is always looking for volunteers to speak at our upcoming meetings! Please contact our Programs Director, Mr. Donald York, if you would like the opportunity to speak or can recommend someone.

Did You Know? The

International Council on Systems Engineering has established a multi-level Professional Certification Program to provide a formal method for recognizing the knowledge and experience of systems engineers, regardless of where they may be in their



If you missed it, not to worry -- you can download his presentation >>HERE<<

Subsequent to the meeting Mr. Gantzer provided us with two reports which may be of interest to those who want to understand why this change came about in the first place. These can be found and downloaded at the our INCOSE Chesapeake Chapter Website.

Visit our <u>Library section of our new improved Website</u> to also find other copies of presentation materials from previous meetings or other gatherings of interest. Poke around and see if anything looks interesting.

Chapter News:

Interim Treasurer Announced

The Chesapeake Chapter President formally announced today the selection of Mr. Glenn Gillaspy as the interim Treasurer and new member of the board appointed to replace David Griffith whose resignation was announced at the April 21, 2010 membership meeting. Mr. Gillaspy brings to the position a solid background that includes an MBA degree and varied financial management assignments including service as a DoD auditor. His biography will be posted on the Web page shortly. In accordance with the Chapter bylaws, vacancies are filled by Presidential nomination followed by approval of the board members. Mr. Gillaspy will serve until the chapter membership's normal board elections are held in the fall.

Feature Article

System Engineering in the Information Technology Trenches

by George Anderson



Remember when camping out in the back yard was an adventure? Some of you do and others have repressed the memory for reasons as varied as poison ivy and other grim realities of the great outdoors. Older system engineers remember the good old days, too, when budgets were

plentiful and programs were unquestionably complex enough to demand a disciplined approach to managing across the individual segments. A space launch, a nuclear reactor, a nuclear airplane or submarine- all of these exuded complexity of an order that required complete integration of the technical effort across diverse fields of expertise and technology.

Failure of these systems carried serious repercussions that included

Read more details at the INCOSE Website.

UMBC

Training Centers
offers

a CSEP Prep Course

Dates: 4 Saturday Mornings, July 10th -- 31st Location: UMBC Training Centers @ 1450 S. Rolling Road, Baltimore, MD 21227

>>Register Here<<

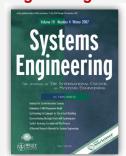
Also check out other local CSEP Exam Preparation and other Systems Engineering training opportunities at our <u>Education</u> page

Webinar (WEB-based

seminary) Date: 21 April 2010 Time: 15:00 UTC / 11 AM EDT Leading Indicators for Systems Engineering Effectiveness This webinar will review the guidance that was developed for a set of systems engineering (SE) indicators that are focused on providing early insight in the effectiveness of the SE process implementation.

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<u>Click</u> <u>Here</u>

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injury and loss of life on a scale guaranteed to make the news. For this and other solid reasons, risk management was taken very seriously.

System engineering's role was so obvious and perhaps successful in those days that there appeared to be no need to codify it beyond the standard practices developed within a company or industry. Things changed when information technology (IT) projects moved out of the dedicated functional environment of independent systems. These projects became increasingly complex due to the demand for more interoperability, integration, and other desirable characteristics that promised a new age of prosperity and achievement. Even more significant the budget for some IT projects began routinely matching that of a bomber fleet.

It would appear logical that systems engineering concepts would be especially important to manage the complexity of those IT projects that involved multiple systems, served large organizations, had huge costs and long delivery schedules.

As logical as that may be, the appreciation of how to manage complexity seems to be lagging in the development and operation of IT technology. It appears that the system engineer in the IT world is increasingly being removed from process oversight and relegated to running errands for the crisis of the day crowd. This crowd all too frequently has dubious credentials for making decisions and may well be a force for change that is far less than what is desired or even expected.

Fortunately this, condition will not survive long and when cost overruns and program failures touch the customers, a new age of systems engineering will emerge. It might not be called systems engineering and there might not even be a specific job title associated, but the management of complexity will always be needed and appreciated by those in the crowd who ultimately achieve success.

A Word from our President Sunday, May 2, 2010



What a wonderful day. I went with my grandson and family to the Meet Thomas Day at the Baltimore Railroad Museum. What I saw was a sleepy under appreciated museum transformed for a day into a media event of significant proportions. The tickets were sold out weeks ago and

the primary consumers were children between 2 and perhaps 5. What the children were getting was an opportunity to physically participate in an idea that for most of them existed only in a television cartoon. Fired up with all the excitement that I observed there, I now write to the members of our Chesapeake Chapter of INCOSE.

First of all, you need to hear about the state of the chapter and I

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Check out these articles:

- Obstacles to the flow of requirements verification (p 1-13)
- The Concept of Reference Architectures (p 14-27)
- Human view dynamics The NATO approach (p 72-79)
- Systems analysis of emerging IPTV entertainment platform: Stakeholders, threats, and opportunities (p 95-107)

As a member of INCOSE you have online Access to the current and past issues of The Journal of Systems Engineering via the Wiley InterScience site. Search the archives and download papers of interest. Registration on the Wiley site is required. Instructions for accessing the SE Journal can be found in INCOSE Connect

This Newsletter is to serve our members and is open to all for contributions. Do you have an interesting idea for an article? A review of a new book related to engineering? Let us know. We'd love to hear about. It may wind up in a future issue of our Newsletter.

will dispatch this briefly and with some enthusiasm. Budgets, schedules, programs, and membership outreach are all moving ahead with the plan and while not without some pain in the execution, the plan is being overseen by a motivated and hard working Board. In addition, the Board is reviewing a student chapter affiliation charter that would open a new area of activity for our members. Details of our progress are important and it is essential that we communicate them to the membership. To this end, the Board will be presenting routine articles in the newsletter to address each area of engagement.

Now back to Thomas. I have already presented my observation of a child's transformation from viewing a cartoon to seeing the reality of a functioning train.

Here at INCOSE, I would challenge you all to view your participation in systems engineering activities as being a facilitator of ideas as well as an executor of physical activities that produce the product or service. You are actually on both sides of the endeavor and need to embrace this concept to be completely successful

When children see a cartoon, they may respond to a good story. If we take all the jargon and technique away from our professional activities we are left with the responsibility to "tell a good story". That story has to capture the imagination of the customer.

When the children see a real train, how well can the reality sustain the story?

Tough job, one could say for the folks putting on the exhibit. So it is for the Systems Engineer who should insure that his/her performance meets the expectations of the story they have created. Have I pushed this metaphor too far? I think not.

I see too many systems engineering plans that cannot be achieved with the available budget or manpower. Please consider taking the responsibility to tell the story well and check out Thomas if you need inspiration.



Keep up with the latest news and events. Find out about our new Board of Directors. Explore our extensive library of previous lectures from our Monthly Dinner Meetings. Learn of the Benefits of Joining INCOSE. Check out Systems Engineering education in the local area. All this and more awaits you at our <u>INCOSE Chesapeake Chapter Website</u>.

For any comments or suggestions about this newsletter please e-mail our <u>President,</u> <u>George Anderson</u> or our <u>Communications Officer, Paul Martin</u>. We value your feedback.

Board of Director Officers, 2010

- President: Mr. George Anderson
- Past President: Mr. Glenn Townson
- President Elect: Mr. John Lewis
- Treasurer: Mr. Dave Griffith
- Secretary: Mr. Bob Berkovits

Directors at Large

- Communications: Mr. Paul Martin
- Programs: Mr. Donald York
- Membership Committee: Ms. Bhanumati Sunkara

Please use the Forward email link below so we can invite your friends to join our mailing list. Thanks in advance.

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