Chesapeake Chapter
INCOSE
International Council on Systems Engineering

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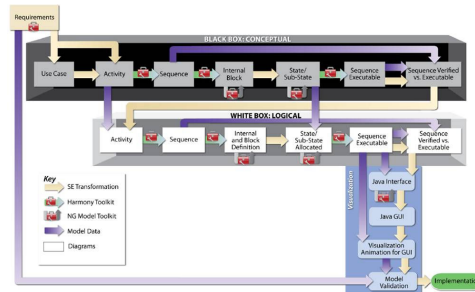Go to Back Issues   **Vol. 1 Issue 8**

August 2010 E-Newsletter

Dinner Meeting - Wednesday 18 August 2010

Architecture Design, Simulation and Visualization Using SysML

Gundars Osvalds, Senior Principal Enterprise Architect Northrop Grumman

Presentation: Verification and Validation of systems designs are difficult because the stakeholders' (e.g., owners, users, and developers) perception may differ from the architects' views. Thus there needs to be a solution that allows the stakeholders and the architect to verify that the design meets the requirements documented and the system capabilities are designed as the stakeholder expected. Mr. Osvalds will discuss a solution that envolves architecture visualization.

Speaker: Mr. Gundars Osvalds is a Senior Principal Enterprise Architect at Northrop Grumman. Mr. Osvalds supports large government transformation programs with systems engineering and architecture tasks, including planning, implementation and reviews of architectural products, and processes for architectural design and modeling. Mr. Osvalds has used and supported the DoDAF and OMB FEA architecture frameworks for the Federal Government and DoD communities.

  >> Learn more by downloading this month's flyer HERE<<

Meal: Bistro Steak Salad and Honey Mustard Chicken Wonton Salad Buffet, rolls and butter, dessert, coffee and iced tea.

Reservations:
  • **By website:** Credit card via PayPal, go to our **>>Registration Page<<** or
  • **By email:** Contact Glenn Gillaspy
For details on the presentation, more about the speaker, cost details,

August 2010

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

This Months Events:
  • **Aug 3:** John Thomas and George Anderson at NASA's Goddard Space Flight Center **See below for details.**
  • **Aug 18:** Our local INCOSE Dinner Meeting

In this Issue
- Next Dinner Meeting
- A Word from our President
- Announcement: Student Chapter begins
- Get to know...Our Student Chapter President: Mr. Matthew Alexander
- Last Month's Meeting
- A New Study Group: Situational Awareness and Systems Engineering
- Feature Article: Systems Engineering in the Roman Empire
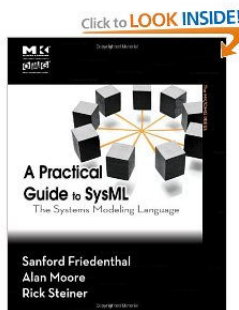- New Chapter Initiative
- New Members for 2010

cancellations, and directions

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:
A Practical Guide to SysML:
The Systems Modeling Language
by Sanford Friedenthal, Alan Moore, and Rick Steiner

A Word from our President

What fun!

The view outside during our February 2010, call in BOD meeting.

While the July temperatures soared and our streets were flooded with violent summer thunderstorms, the plans made by our chapter continued to take form and move down our well-attended conveyer belt towards completion. I am so proud of what we are doing that I want to point your attention toward our most imminent events.

August will be the busiest month yet this year for the Chesapeake chapter and many of our members will be involved in career enhancing events. The first activity is a tour of NASA Greenbelt and attendance at a quarterly SE meeting for NASA employees. INCOSE INTERNATIONAL President, John Thomas and I will be the guest speakers. This will be on Tuesday, August 3, 2010. Please consider coming.

Tuesday, August 17, 2010, is the engineering society day at the Kossiakoff Conference Center at the Johns Hopkins Applied Physics Laboratory. Our chapter will have a table manned by volunteers with all the necessary visual aids, brochures, briefing materials and on line support to promote our chapter. It's a great opportunity to meet new people and sell our programs. Past President, Mark Walker will be manning a table right beside us featuring the progress made in SYSML at the INTERNATIONAL Committee level. If you want a fun day, drop by between 10am and 2pm. A lunch break should do it and you

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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.

Our Chapter now has a presence on

Check it out and join our group so we can together discuss the latest in Systems Engineering news and events.

Events in the Area:

NASA's Goddard Space Flight Center

Date: Aug 3, 2010, 1:00 pm
Presentation: *The Need for Systems Engineering in Technology Development Programs*
Speaker:
John Thomas; President Elect, INCOSE; Senior Vice President at Booz Allen Hamilton

can grab a quick barbeque treat at Kloby's as you swerve off 29 onto JH drive. Just do it.

The next event will be the monthly meeting on August 18, 2010. Our featured speaker is our chapter member, Gundars Osvalds , who will present his latest work on architectural views and the practice of architecture. Gundars has presented more papers on architecture at the INTERNATIONAL Symposium than anyone one else I know and he has worked at improving the practice for many years. If you want to be taken seriously in the practice of architecture, I think it is imperative that you hear and understand what Gundars has to say. We will also formally welcome our new student chapter officers. I also expect to announce the initial members of the Eteam and how we will conduct operations in that venue. For those that are unemployed or are looking for other employment, please try to attend this meeting.   Please consider bringing a friend or two. Remember, our meetings are always open to non-members and we probably don't make that clear enough. Help me spread the word on this.

The final event of August is the CSEP reception being held at the Baltimore Engineers Club on Thursday, August 26, 2010. John Thomas has agreed to be the keynote speaker. A special surprise guest will follow John in addressing the CSEP holders. The Washington Regional Chapter and Southern Maryland Chapter have both accepted invitations to send a member of their BOD to attend and we hope that we can work with them to make this an annual event.

While this event is only for the CSEP holders, don't despair chapter members. We will be having other events at the Engineers Club before the year is over just for you. Joint meetings with other societies, a tutorial, and perhaps the holiday party will all be candidates. Please lean forward and email Don York, our Program Director with your preferences and feedback.

Finally, please remember that if you miss August, you will have a lot of catching up to do.

Return to top.

Announcement:
New Student Division started by the Chesapeake Chapter

Also:
Presentation: *Overview of INCOSE and the Chesapeake Chapter*
Speaker:
George W. Anderson
President; Chesapeake INCOSE Chapter; Camber Corporation
More Info Here

Mark your Calendars:

Date: **15 September 2010**
Presentation: *Cybersecurity - Just Another 'Y2K'?*
Speaker: J.O. McFalls; Point One

Date: **20 October 2010**
Presentation: *Human Systems Integration*
Speaker: John Winters, CHFP; Basic Commerce and Industries, Inc.

Date: **17 November 2010**
Presentation: *Panel: Cyber-Security*
Speakers: Various

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.

What's the lowdown on CSEP?

The International Council on Systems Engineering has

The Chesapeake Chapter Board of Directors (BOD) are proud to announce the inauguration of the new Student Division. The event occurred at the recent BOD meeting held on July 14, 2010 with the official acceptance of the Student Division. Present at the event with the BOD were Steve Biemer, Student Division Faculty Advisor and Student Division President, Matt Alexander. Once again, Johns Hopkins University, has shown generous support to the Chesapeake Chapter by recommending Steve Biemer as the Faculty Advisor.

The Student Division officers are:
- **President**: Matt Alexander
- **Secretary**: Josh Proteau
- **Treasurer**: Josh Seo

Currently, all are Johns Hopkins University Graduate students. Other local universities and colleges, such as the University of Maryland Baltimore College (UMBC) will also be engaged in the growth of the Student Division. The new Division is one of only six Student Divisions that are part of the INCOSE international organization. More details to follow in future Chesapeake Chapter newsletters.

Return to top.

Get to Know ...

Our Student Chapter President: Mr. Matthew Alexander

Matthew is an Information Systems Engineer intern at MITRE Corporation and taking the Johns Hopkins Software Systems Engineering course in the university's Masters of Systems Engineering program. This spring, he attended the GMU C4I Center-AFCEA Symposium and learned a lot. One of the favorite quotes from the conference he vividly recalls was, "The defense acquisition process is no replacement for systems engineering."

He has five years of work experience in a variety of industries but brought system solutions to each: A Fortune 200 healthcare company, supporting the Army and the Census Bureau at a government contractor, and as an intern at Los Alamos National Laboratory's Neutron Science Center.

established a multi-level Professional Certification Program to provide a formal methodfor recognizing the knowledge and experience of systems engineers, regardless of where they may be in their career.
Read more details at the INCOSE Website.

He has been active in INCOSE since December, 2008. He loves applying his energy to building organizations and applying his energy, passion, and perspective on systems engineering challenges of all kinds. He has written two graduate research papers. One was about how to utilize net-centric, cloud computing and service-oriented architectures to meet DoD mission needs. The paper's analysis included private clouds and DISA's RACE cloud computing system. The second one explored ways to integrate systems engineering, software development lifecycles, as well as management and leadership approaches in the defense sector. However, he is fascinated by the opportunities that the field of systems engineering has in the federal sector—for example, Apps.gov. Check it out.

In his free time, he skis, enjoys live music, going to the theater, meeting new people, and traveling. He has lived in London for 6 months and traveled through a number of countries throughout Europe.

Return to top.

Did You Miss Last Month?
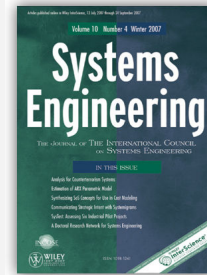## Lessons from a Ditch Digger

ITIL® is the international *de facto standard* for IT Service Management. Carl Deputy explained how he learned about being a "Service Provider" from a western Virginia back-hoe operator named Joey who he was trying to hire to dig a ditch for a water pipe to a horse barn. However, Joey started to elicit Carl's true requirements by asking the right questions. In the end no ditch was dug, the horses were gone and Carl had a much needed landscaping contract. Truly a win, win, win situation. Being a world class IT Service Provider requires the same kind of commitment to the customer.

Carl went on to explain how culture and change are the keys to implementing (or adopting) Good Practices based on ITIL®. Not easy but necessary in order for an organization to enjoy the benefits of ITIL®. He then provided several business transformative ideas and actions required to bring about this cultural shift, along with the caveat: "Achieving organizational change is a leadership activity, and should not be attempted by those without the authority to effect change in people's day to day behaviors." Want to know what these transformative ideas and actions are? Find out for yourself by downloading Carl's brief today.>>**HERE**<<

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

Also check out other Systems Engineering training opportunities at our Education page

Discover *Systems Engineering*

Read the current issue free on-line for a limited time: **Click Here**

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Check out these articles:
- *An extended enterprise architecture for a network-enabled, effects-based approach for national park protection (p 209-216)*
- *Lunar architecture and technology analysis driven by lunar science scenarios (p 217-231)*
- *Integrating humans with software and systems: Technical challenges and a research agenda (p 232-245)*
- *Mapping space-based systems engineering curriculum to government-industry vetted competencies for improved organizational performance (p 246-260)*
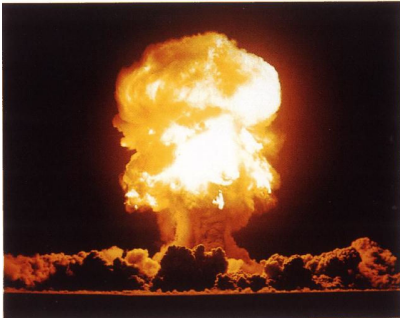
As a member of INCOSE you have online Access to the current and past issues of The Journal of Systems Engineering via the Wiley InterScience site. Search the archives and download papers of interest. Registration on the Wiley site is required. Instructions for accessing the SE Journal can be found in INCOSE Connect

With Connect you can also download the July 2010 INSIGHT. Special Feature: *The*

A New Study Group:
Situational Awareness and Systems Engineering
by Glenn Gillaspy and John Lewis

Situational awareness is a key SE concept. Poor situational awareness has lead to multiple crashes, the Three Mile Island accident, and near misses with ICBM launches. Situational awareness in large systems has three elements, all of which must be addressed in complex systems:

• Crew coordination
• Status monitoring and updates
• Checklist discipline and / or adherence to procedures

One example was an airplane accident with fatalities on the East coast of the US. The two pilots became engaged with a possible burned-out light bulb. At least two situational awareness elements were ignored: crew coordination and adherence to procedure. The plane crashed with fatalities. If one pilot had said: " I'm flying the aircraft" (crew coordination); and the other had said "check" and then "I'm working the light bulb problem" (adherence to procedures) then a crash with fatalities would have been avoided.

Another example was combat crews at intercontinental ballistic missile (ICBM) command posts. Simulators and class room facilities are available so that crews can master situational awareness. However, for the large command centers like NORAD, simulators are not available. For training they transfer their mission to back-up facilities, go off-line, and conduct training exercises in the actual command centers. The movie "War Games" and other movies and books illustrate this reality. The concept in "War Games" is that false positives could cause WWIII (or Armageddon). "War Games" was patterned on an actual incident after a training exercise in the early 1980's. Luckily, cool heads prevailed until correct status was available and ICBMs were not launched when inaccurate status was presented.

A more complex situational awareness study was the incident at Three Mile Island (TMI). After many months of scrutiny, the irony of TMI is that if the operators had done nothing, then by design the reactor would have safely contained itself. The Chesapeake Chapter is starting a situational awareness study group. If you are interested in becoming a charter member, send an e-mail to George.Anderson@incose.org.

Feature Article
Systems Engineering in the Roman

Best of Loughborough: Highlights from the Conference on Systems Engineering Research

Clink on image above and Log-In today.

Did You Know:
You can change your INCOSE Profile to be more accurate

I**Did you know** that you have the ability to reset your own password, change your address, phone number and employer, and even change the e-mail addresses you want your incose.org e-mails to forward to?
Did you know that you can also update your biography and even your picture?
To keep your membership information up to date, just go to www.incose.org. On the left side, select the option to View / Update Member Record or ResetPassword.
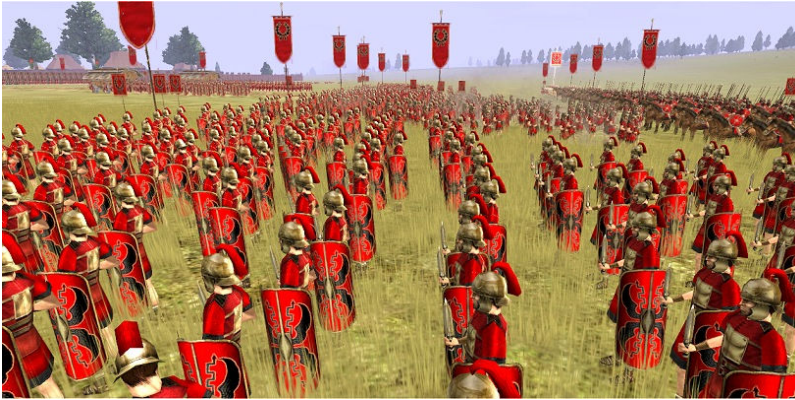
Do it TODAY.

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.

New Members for

Empire
by George Anderson

The leadership in the Roman Empire was generally known to have paid a lot of attention to efficiency and good governance. Almost everything we know about this is documented in surviving details from contemporary writings and corroborated by archaeological examinations of sites and period artifacts. At various times in history subsequent to the end of the Roman era, historians have admired the wisdom that was revealed in these writings and some have tried to apply it to their own contemporary problems. It is somewhat uncanny how each generation including those currently alive become energized by discovering parallels from the past and our present circumstances. Some have glibly dismissed this as just the satisfaction of knowing "how the movie ended" but it is far more, as we shall see.

One such surviving document was the work of a Roman citizen named Flavius Vegetius Renatus. He lived between 300 and 400AD and wrote what today could be considered a process improvement proposal for the Emperor Valentinian. At some point after 378AD, Valentinian was just a little bit concerned with military readiness levels. His Legions had been deteriorating in various evaluations and he suspected that he needed to consider some type of reorganization and process reengineering.
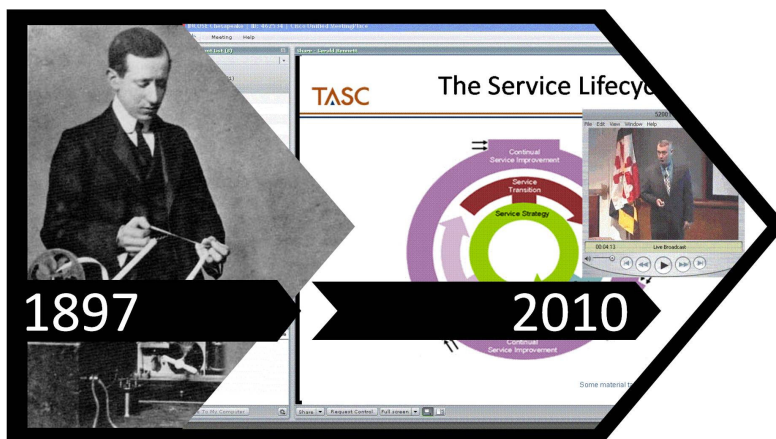
Interested? Read More.

Return to top.

New Chapter Initiative

Testing the Future In the Shadow of Marconi
by Erik DeVito

2010

- **Lynne Ambuel**; Senior IA Engineer for Johns Hopkins University Applied Physics Lab
- **Michael Anderson**; Systems Engineer
- **John Benson**; Analyst for JHU/APL
- **Richard Bernstein**; Sr. Systems Engineer for JHU/APL
- **Gwendolyn Boyd**; Executive Asst Chief of Staff for JHU APL
- **Pete Brueggemann**; Senior Staff Engineer for Motorola
- **Carey Chang**; Mechanical Engineer for Science Applications International Corporation
- **Nathan Cho**; Systems Engineer for Northrop Grumman Corporation
- **John Cornyn**; Sr. Systems Engineer for Northrop Grumman Corporation
- **Erik Engbrecht**; Systems Engineer for Northrop Grumman Electronic Systems
- **Tracy Fisher**; Senior Systems Engineer for The Johns Hopkins University Applied Physics Laboratory
- **Glenn Gillaspy**; Systems Engineer for DoD
- **Gene Givens**; Sr. Systems Engineer for AMPS Strategies/PEO IEW&S - PM Robotic & Unmanned Sensors
- **Keith Hensley**; Software Engineering Manager for Saft America Inc.
- **Roy Hines**; Associate for Booz Allen Hamilton

On 13 May 1897, Guglielmo Marconi sent the first ever wireless communication over open sea. It transversed the Bristol Channel from Lavernock Point (South Wales) to Flat Holm Island, a distance of 6 kilometres (3.7 mi). The message read "Are you ready." A good question to consider as our Chapter starts a new initiative to make our excellent Monthly lectures more available to a wider audience.

On Wednesday, 21 July, 2010, the Chesapeake Chapter performed a dry run test of the streaming webcast capability that JHU-APL has in the Parsons Auditorium. The test was performed across three states with testers in Elkridge, MD., Johnstown, PA., and Plainsboro, NJ. All three test sites had access to a 2 way teleconference, real-time slide presentation, and streaming video and audio over the web using Apple Quick Time. All three sites were able to see Carl Deputy give his lecture on ITIL and all reported back average video and audio quality. All three testers felt that it was a reasonably successful exercise.

This represents the first of many innovative steps that will be taken by the Chesapeake Chapter to expand their presence and establish a reputation for offering quality presentations using this live webcast capability. Mr. Jim Peter of JHU-APL and his Audio-Visual Crew, Steve Ferraro (In the control booth) and Gerald ---- (On the camera) enabled Chesapeake's Erik DeVito to execute this event to an outstanding outcome. All involved deserve a great deal of recognition for their professionalism.

Return to top.

Don't Forget
Call for Nominations for Systems Engineer of the Year

- **Nominations for the 2010 Systems Engineer of the Year are now open.**
- Completed Applications must be received by **1 Oct 2010** for consideration in this award period.
- Award Period: 1/1/2008 – 12/31/2010

Click here for Nomination Form

- **Jeffery Hoellein**; Systems Engineering for Northrop Grumman
- **Matthew Keating**; Senior Associate for Booz Allen Hamilton
- **Valerie Mallder**; Principle Staff for Johns Hopkins University Applied Physics Laboratory
- **Yvette McDonald**; Systems Analyst for Lockheed Martin
- **Clayton McKindra**; Program Manager for Federal Aviation Administration
- **Liz Morrissey**; Systems Architect for Northrop Grumman
- **Puran Nebhnani**; Technical Lead/Systems Architect for Secured Sciences Group, LLC
- **Eric Ragin**; Principal Engineer for CyberPoint, International
- **Mark Sabins**; Chief Engineer for SAIC
- **Wyman Spacil**; Fellow Engineer for Northrop Grumman
- **Aaron Speight**; Mechanical Engineer for SAIC
- **Jennifer Suppa**; Associate Professional Staff II for Johns Hopkins University Applied Physics Laboratory
- **Michael Trela**; Space Systems Engineer for Johns Hopkins University Applied Physics Lab
- **Terri Wolfrom**; Senior System Engineer/Enterprise Architect for Stinger Ghaffarian Technologies

We welcome our new 2010 members. We look forward to

- All INCOSE Chesapeake Chapter members are eligible for nomination.
- Nominations can be made by anyone including non-members.
- Self-nominations are acceptable.
- Nominations should be emailed carol.hutchinson@incose.org
- All nominations due by **09/15/2010**.

Click here for Application Package

- Application Package to be emailed carol.hutchinson@incose.org
- Application Package must be submitted no later than **10/01/2010**.

Evaluation Committee is composed of past SEY winners with latest winner being the Chairman. Winner will be announced at the annual Chesapeake Chapter Holiday Dinner.

seeing you at our meetings and tutorials.

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 INCOSE Chesapeake Chapter Website.

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

Board of Director Officers, 2010	Directors at Large
- President: Mr. George Anderson	- Communications: Mr. Paul Martin
- Past President: Mr. Glenn Townson	- Programs: Mr. Donald York
- President Elect: Mr. John Lewis	- Membership Committee: Ms. Bhanumati Sunkara
- Treasurer: Mr. Glenn Gillaspy	
- Secretary: Mr. Bob Berkovits	

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