Chesapeake Chapter
INCOSE
International Council on Systems Engineering

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October 2010 E-Newsletter

Dinner Meeting - Wednesday 20 October 2010

Human Systems Integration and the Systems Engineer

John Winters, Senior Human Factors Engineer, Basic Commerce and Industries.

Presentation: The primary goals of Human Systems Integration (HSI) are to reduce total ownership cost and optimize overall system and mission performance, which are also among the core goals of systems engineering. Even with these shared goals, approaches for coordinating HSI with systems engineering activities can vary widely. It is also common to have a disconnect between high-level policies for HSI and objectives at the program or engineering level. Effective communication about the scope and objectives of HSI is necessary for HSI to positively influence cost and performance. This presentation will discuss how your basic conception of HSI impacts your ability to communicate about the integration of HSI and its domains into systems engineering activities. It will also identify and address solutions to common obstacles or barriers to implementation of HSI in a systems engineering context.

Speaker: Mr. John Winters is a Senior Human Factors Engineer at Basic Commerce and Industries (BCI) in Dahlgren, VA, where he also serves as the Dahlgren Division's Program Director for Human Systems Integration. BCI primarily supports Navy programs through the Naval Surface Warfare Center Dahlgren Division. Currently, Mr. Winters' primary area of work supports a demonstration to integrate control of UAVs into launch and recovery functions aboard aircraft carriers. His research experience includes demonstration of performance improvements with changes in symbology and automated watch turnover. He has also supported development of HSI policy at the systems command level and for the Navy as a whole, and has conducted HSI assessment or certification of multiple programs.

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

Meal: Celebrate Oktoberfest with us - Bratwurst and Knockwurst; Braised Red cabbage; Sauerkraut; Cucumber and caraway salad, 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, cancellations, and directions

Presentation ONLY: FREE (no reservations necessary)

October 2010

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In this Issue

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.

Join INCOSE Today!

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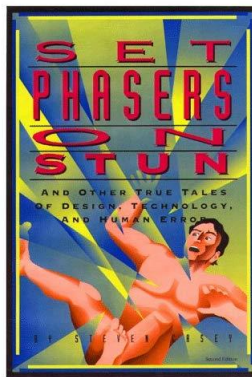
Apply Online Now

Mark your Calendars:

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:
Set Phasers on Stun: And Other True Tales of Design, Technology, and Human Error
by S. M. Casey

A Word from our President

I am amazed at how often I am in a last minute rush to get the important news out to the Chesapeake INCOSE membership as each month rolls around. While brevity and understatement have their places, when it comes to getting the word out to you, our important members, timeliness and detail are probably expected and needed. Rest assured that only the items of highest importance are covered both in the newsletter and in the short 15 minutes that the president sets aside for announcements at each of the monthly business meetings.

Anyone who has attended a monthly BOD meeting (and you are all welcome at any time) knows that there are many activities going on behind the scenes that make possible the ultimate services that are offered for your consumption. Obviously, some efforts do not make it to prime time and are replaced with other things but through it all, your board members and committee volunteers are working hard on your behalf.

I am indebted for the amount of responsibility that our members accept with such enduring good spirit and dedication. I thank you all and sincerely believe that the experiences you have serving this chapter will not only be of professional benefit but also give an appreciation for achieving things that you may not have believed you were capable of mastering. Talk to a Board member or volunteer about their satisfaction index and attend a board meeting to get a feel for things. If you come, we will even let you sit in a leather chair and ask questions. You have this opportunity the second Wednesday of every month of every year- it never ceases.

It appears that there is a higher than normal background noise of contented clucking around the local INCOSE chicken coop. This being especially true after the record setting attendance for J.O. McFalls' presentation on CYBERCOM at our September meeting. For those of you that experienced an uncharacteristic lapse and failed to note this program on our schedule beforehand, we can offer the online record copy of the presentation. Those that were there will tell you that you missed a highly memorable event. Few of our speakers can match the uplifting enthusiasm and passion for the subject that J.O. brought to the podium.

Events in the Area:

Systems Engineering Seminar

NASA's Goddard Space Flight Center

Date: November 2, 2010, 1:00 pm
Presentation: *Common Sense Engineering and the BP and Upper Big Branch Oil Spills*
Speaker:
Beverly A. Sauer, Ph.D.
More Info Here

IEEE Baltimore Section

A special thanks to you J.O. and your folks at PointOne LLC for the attention and time you have invested in the cause of system engineering both at this function and at the CSEP reception in August.

What is going on this month?

Three things. Register for our Holiday party and consider attending the monthly meeting on Wednesday October 20, 2010, that will be held in our dining venue as the Parsons auditorium is being renovated. Finally, vote for our new president elect and treasurer. An online ballot will be provided just a soon as we can get to it with all the other planning activities going on to support the party, scholarships, outreach activities, and the November Panel Discussion.

What is going on in November?

Read the flyer for the monthly meeting. This is a big deal and we anticipate a lot of visitors. Remember to tell your associates that one need not be a member to attend any of our regular meeting activities or use the services of our web site. We are all about promoting system engineering subject matter as well as providing a forum for professional papers and group collaboration.
We are also in talks to engage a famous speaker for a Saturday seminar that will feature current events in aviation archeology. This will likely be a joint activity with another engineering chapter but will certainly include our newly launched student INCOSE chapter. Please watch the web page for specifics as we don't want anyone to miss this unique opportunity.

What is going on in December?

The Holiday party on Thursday, December 16, 2010, will mark the end of an active year for the Chesapeake Chapter and we are determined to expand our attendance out of the Engineers Club library and into the newly renovated main ballroom. We have a lot of folks being presented awards, invited guests from our corporate sponsors, and INCOSE INTERNATIONAL representatives.

There will be no time for shop-talk because we are setting up the dance floor and plan musical entertainment from the Peabody Institute. Rooms can be booked at the Peabody Luxury Hotel located adjacent to the Club for those that want to stay late because the club will be open until you close it just as it was for the CSEP reception.

We know you want to come and so please help us stay on track by registering early on our website using Paypal. We need an early head count to make this reception live up to its potential. Be alert, the ladies may wish to have some lead-time to buy new dresses for the occasion.

If anyone wants to help us execute some part of this important event or wants further details contact Erik Devito (Erik.Devito@incose.org) the planning chairman.

What is going on in January?

Your new BOD will take over and the planning will begin for a new year. Our score sheet for the year's performance will be completed and sent into INTERNATIONAL for evaluation. We normally win either the Silver or Gold rating and either way it's a wonderful chance to reflect on our achievements.

Programs for each Membership meeting will continue to be announced well in advance and for those nervous about speaker cancellations- be advised that JHUAPL has provided us with several very special historic lectures on DVD that we

Event: Baltimore Section - IEEE Signal Processing Society
Date: Oct 19, 2010, 5:30PM
Location: National Electronics Museum -- Pioneer Hall
Presentation: *Constant Amplitude Zero Autocorrelation Sequences and Waveform Design*
Speaker:
John J. Benedetto
More Info Here

Event: Workshop on Green Communications
Date: October 14-15, 2010
This is a fact-finding and research agenda-building workshop on the increasingly important topic of energy efficiency in communications and networking.
Location: Inn and Conference Center; University Of Maryland
College Park, MD
Speakers:
Rajesh Gupta, UCSD; Kaushik Roy, Purdue; Anant Sahai, UC Berkeley; Vinod Sharma, Indian Institute of Science; Anand Sivasubramaniam, Penn State; Mani Srivastava, UCLA; and Roy Yates, Rutgers
More Info Here

Averill M. Law & Associates

Event: Simulation Modeling for System Design and Analysis
Date: November 15-19, 2010
This course is designed for systems analysts, operations research analysts, engineers, military planners, computer scientists, and technical managers who would like to use simulation to design and optimize real-world systems.
More Info Here

UMBC
Engineering Management and Systems Engineering Information Session

can use as backup. Give us some of your valuable time on a third Wednesday of the month during 2011 and we will treat it respectfully.

Enough.

Latest from the Student Division ...

Small Beginnings ... Big Plans

It has been a lively August and September for the Student Division. It developed communications and messaging that will go out to various members of the chapter community when its web presence is ready. In addition, you might be interested to know that the Student Division has its first Associate Systems Engineering Professional--Matthew Alexander. He passed it in his first week as a full-time Senior Systems Engineer at MITRE Corporation in late August. In his preparation for it, he found his Hopkins systems engineering master classes' approach and design very helpful. Of course, he also utilized the free INCOSE member resources too. Click here for more information about INCOSE certification.

The Division is also monitoring the latest system engineering matters by visiting systems engineering conferences and keeping an eye out for interesting books. Matthew Alexander just attended the 3rd International Conference on Model-Based Systems Engineering. He learned how Model-Based Systems Engineering has profound implications for systems engineers. You can learn more about it in the INCOSE Handbook that is found in the members area of INCOSE Connect. Click here to find information about Model Based Systems Engineering.

Matthew Alexander began reading P.W. Singer's Wired for War: The Robotics Revolution and Conflict in the 21st Century. So far, he has found it a well-researched, intriguing read for those interested in engineering, technology, policy, ethics, video games, and science fiction. Are you ready for the brave new robotic world? You probably want to find out--it's already here! Singer considers robotics the biggest shift in warfare since the atomic bomb. With the strategic role system engineers have in various organizations around the world and the potential uses of robotics--it is worth a look. Matthew also welcomes dialogue on the book at the next chapter meeting before the meeting's presentation.

The Division looks forward to meeting more students and anyone seeking more information at the October 20th Chesapeake Chapter meeting. Remember to RSVP and put it on your calendar! The Division also wants to emphasize how it serves undergraduate and graduate students from universities around the region.
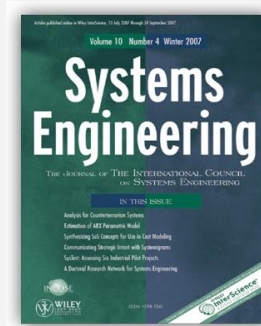
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Did You Miss Last Month?

Lecture: Cybersecurity – is this just another "Y2K"?

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:

- *A systems integration framework for process analysis and improvement (pages 274-289)*
- *Model-driven architecture of a maritime surveillance system simulator (pages 290-297)*
- *Soft systems analysis of the unification of test and evaluation and program management: A study of a Federal Aviation Administration's strategy (pages 298-310)*

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

J.O. McFalls III, President, National Security Division, Point One, Inc., discussed the major issues and impediments to achieving a secure, global IT infrastructure. He explained the unified sense of urgency now prevalent throughout the U.S. Intelligence Community with regard to the need for a stronger cyber security defense for our Nation.

Find out for yourself by downloading McFalls' 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.

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The Dark Side of "Moore's Law"

by Paul Martin

Back in the mid-60's Gordon Moore, a co-founder of Intel, predicted that number of transistors on an integrated circuit will double approximately every two years. This become the infamous Moore's Law. And the electronics industry has strived to maintain this law. Of course this is great for electronic consumers -- they can buy more computational power with every upgrade of computer, laptop, cell phone and game console. But the down side is these same electronic consumers now own computers, laptops, cell phones and game consoles that will quickly become technically obsolete.

How many of you can relate to this story: A few years back my cell phone was showing it's age so I wanted to get a replacement. And I wanted the same exact one -- I knew the functions, I knew how to work it. It was simple. It just made phone calls. I liked it. A lot. So I'm in the wireless phone store explaining this to the sales clerk who gently explained that my phone model is no longer being made and that I can't even get a similar one either because all phones now have camera functions and texting capabilities as well. So I was FORCED into upgrading to the latest whizzbang phone. Ugh!

IEEE Spectrum magazine has a wonderful article from their April 2008 issue, entitled ["Trapped on Technology's Trailing Edge"](Trapped on Technology's Trailing Edge) and it outlines the "dark side of Moore's Law." Technology obsolescence. It's an issue that needs to be addressed "upfront and early" when it comes to developing a new system whose life expectancy is more then five years old. And if it has anything to do with the military then believe me when I tell you it'll be more then five years old. Because it takes more then five years just to design, develop, and test a system before it gets fielded.

So when designing a system keep these lessons in the forefront of your mind and address the obsolescence issue with the same dedication and fortitude as you do

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With Connect you can also download the July 2010 INSIGHT. Special Feature: *The Best of Loughborough: Highlights from the Conference on Systems Engineering Research*

Clink on image above and Log-In 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.

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New Chapter Members for Aug/Sept 2010

- **Michael A. Howard** ARINC Engineering Services, LLC
- **Bruce R. Schupter** Honeywell Technology Solutions, Inc.
- **Greg R. Hollingsworth** JHU/Applied Physics Laboratory
- **Douglas G. Crowe** JHU/APL
- **Kristin A. Wortman** JHU/APL
- **William E. Madden** Corporate Brokers
- **Mark L. Raulin** Accenture
- **Ryan H. Megredy** The MITRE Corporation
- **John Pacak**
- **Richard F. Boehme** STG, Inc
- **Michael D. Berendt** Serco Service Inc

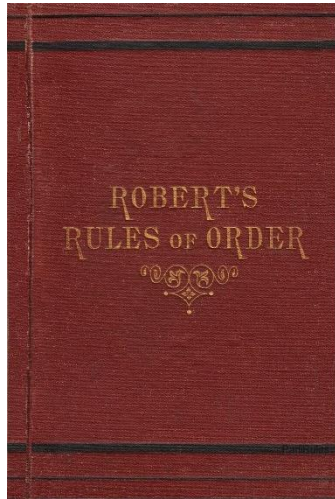We welcome our latest new members. We look forward to seeing you at our meetings and tutorials.

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when you design to meet the customer requirements. If you don't it will bite you in the end.

Feature Article

A 19th Century Process called: Robert's Rules of Order

by George Anderson

"Professional Meetings are a continuing source of frustration both to the participants and to those counting on the outcomes."

While a lot of people have written guidelines on proper conduct of meetings, Robert's Rules of Order (RRO) is unquestionably the most successful de facto standard ever published on this subject and although an American institution since 1878, has been imitated and adopted internationally to a surprising degree. This standard covers three important areas:
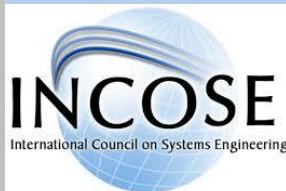
1.	The intent and objective of parliamentary derived rules
2.	Instructions and responsibilities for the conduct of meetings
3.	An ordered and comprehensive process for conducting business in a meeting.

As is the case with any process oriented standard, an identifiable cottage industry of resistance to Robert has emerged using the same type of arguments that systems engineers frequently hear in opposition to many other process improvement efforts or methods. This thought alone should be enough reason for us to review Robert's basic ideas and try to understand why RRO has become so successful in spite of his detractors.

Interested? Read More.

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.

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