INCOSE Chesapeake Chapter
International Council on Systems Engineering

E-Newsletter

October 2013

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President's Point of View
Latest INCOSE Retention Efforts

Dr. William Ewald - INCOSE CC President
wewald@jhu.edu

As long as I have been a member of INCOSE (18 years), the organization has been wrestling with its annual slippage in members. Our growth in new members was positive each year but the net result was reduced by the attrition rate of members who did not elect to renew their membership. In some years, we lost enough members that if they had renewed would have increased our membership by a significant margin. I would not be surprised if other societies suffer from the same malaise. The logical question is what can be done to improve member retention? As a chapter, we certainly have been concerned about retention and what we might do to improve it. Despite our best efforts, we have not cracked the code on this issue. Neither has the America's Sector. In a recent teleconference, Barclay Brown, INCOSE Director for the Americas led a chapter discussion on member retention. I'm passing his opening remarks along to you as a means of framing the issue and developing a chapter-based strategy.

- It costs more to get new members than retain existing ones.
- Organizations usually spend more to get new members than on retaining members.
- Raising retention rates by only five percentage points would result in 478 additional memberships per year at the national level.
- We have room to improve – typical retention rate in our largest US Region (includes Chesapeake Chapter) is about 70%.

Your chapter leadership particularly Bob Lecorchick, Director of Membership, is spending a lot of time on member retention. His good efforts have focused the Board's attention on this strategic challenge. We are making progress in tracking monthly recruitment and retention rates, seeking the root causes for the lapse in membership, and developing retention processes that reflect best practices. To these ends, Barclay has promised to develop a central data base of successful retention strategies reported by the chapters in our sector, synthesize this information, and to make it available to chapters. A sample of ideas discussed during the teleconference included use of Global Meet, reduced dues for those

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!

INCOSE
International Council on Systems Engineering

Apply Online Now

The Chesapeake Chapter is always looking for volunteers to speak at our upcoming meetings! Please contact our 2013 Programs Director, Dr. Alex Pavlak, if you would like the

who are unemployed, attention to personal value vice company value (reflected in increasing corporate non-support for dues or travel), employment counseling, passive approaches (such as availability of tools, etc.) and more. Barclay has asked the chapters to submit their proven practices, lessons learned, and other useful information. I would hope that this initiative might result in a useful product sometime this fall.

But we are not waiting. Bob and our Board have already started to work on promising retention strategies. We are upgrading our technical program -mapping our lectures and workshops to stated member interests, beginning a process of linking unemployed members to organizations seeking systems engineers, implementing more effective communication channels with our members, and facilitating remote access to our meetings and lectures. More ideas are under consideration – examples include access to employment counseling, and more robust networking.

If you have any suggestions, please contact Bob (Robert.Lecorchick@jhuapl.edu). As soon as we begin receiving retention reports from Barclay, we'll pass it along in our Web site or in future POV columns. I'd like to leave you with two important reminders. Our chapter is currently seeking nominations for three Board positions – President-elect, Secretary, and Director of Membership. Submissions need to be in hand by 1 November. Details are contained in our Web site.

We are also seeking nominations for our Systems Engineer of the Year Award (due 26 October). Details are also contained in our Web site. Best to all, and thanks for the continuing support you provide our Chapter. Best regards.

Bill Ewald - INCOSE Chesapeake Chapter President

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BOARD OF DIRECTORS (BOD) 2013 ELECTIONS

Welcome to the INCOSE Chesapeake Chapter elections for the 2014 Board of Directors. The election process is an important part of getting the most value from your INCOSE membership.

Running for office is simple. If you are a member in good standing, you can file for any of the open positions. This year the three open positions are:
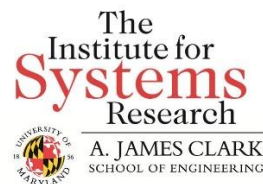
- President-elect
- Secretary
- Director of Membership

Below is a list of primary roles and responsibilities for each position. While this list was taken from the INCOSE Chesapeake Chapter 2013 OpsPlan all prospective candidates should consult the document for additional details and context. **President Elect**

- Update, maintain, and interpret the Chapter Operating Plan and the Strategic Plan.
- Is the point-of-contact for revisions to the Constitution and Bylaws.
- Coordinates with the Programs Committee Chairman and Past President to insure schedules and program objectives are met.
- Preside at CC and BOD Meetings when President is not present.
- Work with the Membership Committee Chairman on membership drives and organizational outreach.
- Provide liaison with the INCOSE Foundation and lead the annual scholarship program for the Chapter.
- Support the success of the newsletter by providing articles or column reports.

Secretary

- Prepare minutes of all 2012 Board of Directors meetings and distribute to CC members via email at least two working days before the next month's board meeting.
- Prepare final summary report (Annual Report) of 2012 Chapter activities
- Maintain chapter records to include all meeting minutes, records of attendance, performance metrics, financial records and any other items assigned by the BOD.
- Organize and display the records in a suitable format in a manner approved by the BOD.
- Send list of Chapter officers to the INCOSE INTERNATIONAL Business Committee
- Maintain and ensure access to Chapter history documents for the BOD and Chapter membership.
- Alert the BOD of approaching deadlines for all administrative actions and reports
- Support the success of the newsletter by providing at least four articles, column or book reports.

Director of Membership

- Supervise and carry out all formal efforts to increase the membership of the Chapter.
- Provide membership records data access to the BOD and committees.
- Notify the board of any member deserving special recognition for accomplishments relating to membership or in the practice of systems engineering.
- Assist the President in presenting individual awards at chapter meetings and events.
- Review the draft Chapter Operating Plan in January and February.
- Collaborate with the Communications Chair to prepare a member recruitment package for new members.
- Collaborate with presidents to solicit corporate, government, and academic sponsors to support CC membership expansion.
- With the assistance of the Communications Director, conduct membership surveys to solicit opinions on chapter issues, goals, and recommendations.

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.

- Maintain a Membership Committee document trail to insure continuity and historical record of the membership activities complete with metrics to show the relative effectiveness of each activity attempted.
- Prepare a Membership Committee process and guide for use by subsequent Membership Committee Chairs.

If you are considering running for office, we encourage you to meet with a current sitting BoD member to further discuss the position that you are pursuing. To enter your candidacy simply send an email to Donald.York@INCOSE.org by COB 14 October 2013.

- A bio and position/vision statement
- A high quality, 2" head shot

Schedule	Activity
14 October 2013	Candidate slate CLOSED;
16 October 2013	Slate presented to chapter at Member Meeting
18 October 2013	Ballots sent to membership via email
01 November 2013	Ballot Submission Deadline
13 November 2013	New officers and director announced
16 January 2014	New officers and director sworn in and installed

Apart from being a member of the Board of Directors for the Chesapeake Chapter, there are various other avenues for members to become involved. INCOSE Chesapeake members can attend any board meeting or get involved in any of the committees. Additionally, the chapter is always in need of volunteers to assist with various activies. Especially in the areas of Chapter Outreach, SE focused initiatives, and Technical SE Working Groups. *Dr. Donald York Chair, Elections Committee Donald.York@INCOSE.org*

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16 October 2013, Dinner/Lecture (6:00 – 8:00 pm)
Cyber and Physical Threats to the Electric Power Grid

Steve McElwee, Manager, Corporate Information Security, PJM Interconnection

Presentation: The electric power grid is a synchronized system of interdependent physical generators, transmission lines, transformers, and protective equipment that is owned by a wide variety of utilities. Operating this complex system requires large volumes of data and information systems that enable accurate decision-making to optimize the balance of reliability and economics. The reliance of society on electricity requires critical infrastructure owners and operators to reduce the risk of power outages despite a growing list of evolving threats. This presentation will provide an overview of cyber and physical threats to the power grid, such as nation-state threats, cybercrime, hacktivism, insider threats, solar flares, and EMP. It will also review leading approaches to resilient operation in the face of these threats. **Speaker:** Steven McElwee oversees a variety of cyber security functions at PJM Interconnection, a regional transmission organization responsible for managing the high-voltage electric power system serving 13 states plus the District of Columbia. He is responsible for cyber threat and risk analysis, security policy, vulnerability management, security monitoring, incident response, cyber

forensics, and security assessments. He has over 25 years of experience in a variety of information technology and cybersecurity roles. He has a BA in Computer Science, an MBA, and an MS in Computer Information Systems and holds CISSP certification.

Location: Applied Physics Laboratory, Johns Hopkins University; 11100 Johns Hopkins Rd Laurel MD 20723 (Main Entrance – Lobby 1)

>>Download the Meeting Flyer Here<<

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26 October 2013, Workshop: (9:00 - 5:00) Dr. Richard de Neufville Increasing System Value Through Flexibility in Design

Dr. Richard de Neufville

Description: This course shows how Flexibility in Design can increase the expected value of a system by 10 to 30%. Flexibility adds value because it simultaneously allows the system to avoid worst outcomes, while enabling it to seize good opportunities – a "win–win" approach. The Flexibility Model recognizes that the future is uncertain. The fact is that forecasts – such as of the level of traffic at an airport, or the quantity of oil and its price – are "always wrong". What actually happens over the lifetime of a project almost never corresponds to the initial forecasts. This reality means that evaluations based on fixed forecasts are unrealistic and lead to the choice of inferior designs. The Flexibility Model evaluates alternative possible designs over the wide range of futures that could occur. It does this by using simulation processes, basically the 'Monte Carlo' methods properly adapted to the actual conditions. The course presents the essential concepts and methods for flexibility in design, illustrates them by example, and works with participants to assist them in applying the concepts to design problems that interest them. The course distributes signed copies of text "Flexibility in Engineering Design" [MIT Press, 2011].

>>Download the Tutorial Flyer Here<<

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Don't Miss November's Dinner/Lecture, 20 November 2013
Identity Management

Mr. Todd Rossin, Managind DIrection, Founder, IDMWorks

Presentation: Todd Rossin will present core aspects of Identity and Access management including:

• Assessment & Roadmap – Review and Planning,
• User Provisioning – Automation of user management and access to systems within an organization,
• Change Management – Automation and support for development, rollout and maintenance of system components from current state to future state,
• Role LifeCycle Management – Modeling and implementation of Roles within an organization,
• Access Management &ndash Real–time enforcement of application security using identity–based controls and provisioned access rights,
• Governance – The presentation will focus on use cases and methodologies proven over the last decade to assist with Identity and Access Management, and
• Audit & Compliance – Support for laws, regulation and policies.

Bio: Todd Rossin is responsible for the oversight of various IDMWORKS business segments and for the development of strategic plans to sustain the company's rapid growth pattern. Todd has over twenty years of management and technical experience that assist IDMWORKS clients in accomplishing their missions and objectives more effectively. Todd received his Bachelor of Arts degree from the University of Delaware and his MBA and Masters of Science degrees from Wilmington College. Todd also holds many technical certifications in Identity and Access Management, and IT Security, as well as multiple industry certifications including the CISSP, Security+, MCSE, MCDBA, AIS - HP Identity Management, and the CA DLP Accreditation

>>Check the web page for details when they become available<<

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11-12 November 2013: Dr. Drew Hamilton
2–Day Workshop: Understanding and Using the new DoDAF v2.02

Dr. Drew Hamilton

Description: The DOD released version 2.02 of the DOD Architecture Framework (DODAF) represents major changes and further integrates net-centricity into DOD architecture efforts. Joint Staff requirements (including JCIDS) continue to expand DODAF-compliant architecture requirements. In a resource-constrained environment Combatant Commanders are developing DODAF architectures that directly impact how DOD will develop and field all future capabilities. JCIDS mandates all ongoing and future acquisitions must include integrated architectures that comply with DODAF requirements. This seminar provides an example-based methodology for designing operational, capability, service, program, technical

and systems architecture views and products that are consistent with the guidelines of the DoD Architecture Framework version 2.0 (DoDAF). You will receive step-by-step compliance guidelines for ensuring your technologies, systems and architectures meet the technical and architectural requirements imposed by the DoD. Learn how to save time following successful strategies while avoiding costly pitfalls when meeting DoD requirements. If you produce architectures, systems and technologies for DoD and the Services, you must ensure that your products are compliant with DoDAF. All new acquisitions must include integrated architectures in their JCIDS documentation including ICDs, CDDs and CPDs and must be DODAF-compliant.

>>Download the Tutorial Flyer Here<<

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Did you miss last month's lecture? Download Presentation: The AP1000™, A Third Generation Nuclear Reactor

Since the first nuclear powered submarine (USS Nautilus - 1954) and first commercial nuclear power electrical generation station (Shippingport, PA – 1957) Westinghouse has been the industry leader in the development/evolution of larger and safer commercial nuclear power electrical generation stations. The early commercial nuclear power plants were typically less than 600 Megawatt electric two-loop plants that were "upsized" to 3–loop and then to 4–loop plants. As plants were "upsized" the size and complexity of the structures, components and instrumentation grew. In the late 80s Westinghouse recognized that a different "simplified" design was needed if nuclear power was to remain an economical source of electricity. This presentation will cover major differences between the previous generation of plant designs and the Westinghouse AP1000™ and the status of AP1000™ plants currently under construction.

Mr. Andrew Drake

>>View the After Action Report Here<<

Upcoming Events

- October 14: BoD Nominations Slate Closes
- October 16: Cyber and Physical Threats to the Electric Power Grid, *Mr. Steve McElwee*
- October 26: Tutorial: Flexibility in Design Engineering, *Richard de Neufville*
- November 11 & 12: 2–Day Workshop: Understanding and Using the new DoDAF v2.02, *Dr. Drew Hamilton*

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, William Ewald or our Communications Officer, Oren Eisner. We value your feedback.

Board of Director Officers, 2013
-President: Dr. William Ewald
- Past President: Dr. Don York
- President Elect: Dr. William Ewald
- Treasurer: Mr. Richard Bentley
- Secretary: Mr. Mark Kaczmarek

Directors at Large
- Communications: Mr. Oren Eisner
- Programs: Dr. Alex Pavlak
- Membership Committee: Mr. Bob Lecorchick

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