INCOSE Chesapeake Chapter
International Council on Systems Engineering

INCOSE Chesapeake Chapter
P.O. Box 535
Laurel, MD 20725-0535

E-Newsletter

June 2016

Back Issues

President's POV - June 2016

Ellie Gianni
President, ESEP

How the Best Leaders Lead

As leaders, we are often presented with challenges. As the President of the Chesapeake Chapter I am continuously challenged in this position to improve communications with our Board, our members and our sponsors. I believe that occasionally, we all need to be reminded of how the best leaders lead. They embody qualities required of a good leader all of the time, not just some of the time. They not only lead, but also follow when needed. It is definitely not an easy job, but one of the most rewarding jobs. According to Peter Economy, the author of "Leading through Uncertainty", we as leaders, need to model the following qualities every day.

1. Awareness There is a difference between management and employees, bosses and workers. Leaders understand the nature of this difference and accept it; it informs their image, their actions, and their communication. They conduct themselves in a way that sets them apart from their employees--not in a manner that suggests they are better than others, but in a way that permits them to retain an objective perspective on everything that's going on in their organization.

2. Decisiveness All leaders must make tough decisions. It goes with the job. They understand that in certain situations, difficult and timely decisions must be made in the best interests of the entire organization, decisions that require a firmness, authority, and finality that will not please everyone. Extraordinary leaders don't hesitate in such situations. They also know when not to act unilaterally but instead foster collaborative decision-making.

3. Empathy Extraordinary leaders praise in public and address problems in private, with a genuine concern. The best leaders guide employees through challenges, always on the lookout for solutions to foster the long-term success of the organization. Rather than making things personal when they encounter problems, or assigning blame to individuals, leaders look for constructive solutions and focus on moving forward.

In Vol. 7 Issue 6

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.

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http://www.incose.org/about/Membership/Join

4. Accountability Extraordinary leaders take responsibility for everyone's performance, including their own. They follow up on all outstanding issues, check in on employees, and monitor the effectiveness of company policies and procedures. When things are going well, they praise. When problems arise, they identify them quickly, seek solutions quickly, and get things back on track.

5. Confidence Not only are the best leaders confident, but their confidence is contagious. Employees are naturally drawn to them, seek their advice, and feel more confident as a result. When challenged, they don't give in too easily, because they know their ideas, opinions, and strategies are well informed and the result of much hard work. But when proven wrong, they take responsibility and quickly act to improve the situations within their authority.

6. Optimism The very best leaders are a source of positive energy. They communicate easily. They are intrinsically helpful and genuinely concerned for other people's welfare. They always seem to have a solution, and always know what to say to inspire and reassure. They avoid personal criticism and pessimistic thinking, and look for ways to gain consensus and get people to work together efficiently and effectively as a team.

7. Honesty Strong leaders treat people the way they want to be treated. They are extremely ethical and believe that honesty, effort, and reliability form the foundation of success. They embody these values so overtly that no employee doubts their integrity for a minute. They share information openly, and avoid spin control.

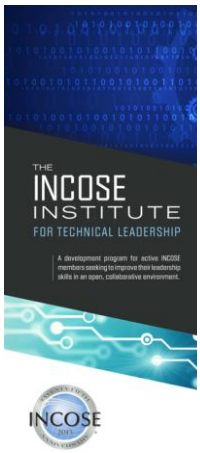
8. Focus Extraordinary leaders plan ahead and they are supremely organized. They think through multiple scenarios and the possible impacts of their decisions, while considering viable alternatives and making plans and strategies--all targeted toward success. Once prepared, they establish strategies, processes, and routines so that high performance is tangible, easily defined, and monitored. They communicate their plans to key players and have contingency plans in the event that last-minute changes require a new direction (which they often do).

9. Inspiration Put it all together, and what emerges is a picture of the truly inspiring leader: someone who communicates clearly, concisely, and often, and by doing so motivates everyone to give his or her best all the time. They challenge their people by setting high but attainable standards and expectations, and then giving them the support, tools, training, and latitude to pursue those goals and become the best employees they can possibly be.

If you are ready to take the leadership challenge for our chapter, we have opportunities for you! The following vacancies will be available in 2017. They are:

- President Elect
- Treasurer
- Communications Director

The Chesapeake Chapter is always looking for volunteers to speak at our upcoming meetings! Please contact our Programs Director at programs@incose-cc.org if you would like the opportunity to speak or can recommend someone.



Please contact the Chair of our Nominating Committee, George Anderson at xenia52@aol.com if you have any questions or are interested in leading our chapter and running for office.

Certified Systems Engineering Professional Training

Don't forget to register for the 5-day Systems Engineering Professional Certification training event! Registration will be closing soon!

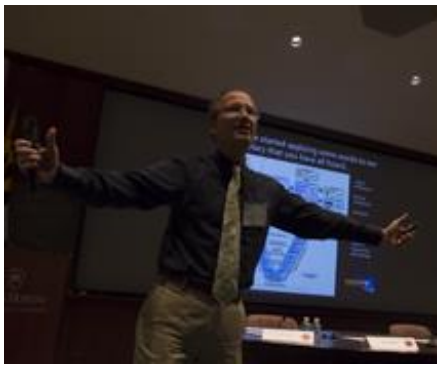
The course is OPEN to anyone interested in receiving this training and will be provided by CTI at the Johns Hopkins University Applied Physics Lab in Laurel from June 13 through 17 from 8 AM to 5 PM in the Montpelier 6 Building in Room N111. Tuition is $2868 for the week.

This includes all course materials, practice exams, breakfast and lunch daily. Questions? Contact Ellie Gianni at egianni@verizon.net or Register at: http://www.certificationtraining-int.com/event-registration/?ee=155

INCOSE Chesapeake Chapter Programs Update

Gundars Osvalds
Programs Director, ESEP

The May 18 Lecture by Mr. Rick Dye, Administrator for the State of Maryland Coordinated Highways Action Response Team (CHART)" program was a huge success. Mr. Dye provided a briefing entitled, "The Road Ahead - Advanced Traffic Management and Emergency Operations in the State of Maryland". More than 50 people attended the lecture. Because of the large amount of interest in this topic, there may be the opportunity for a Chapter sponsored workshop at APL in the future. Stay tuned!



Rick Dye, Maryland CHART Program Administrator Discussing Traffic Management Systems

The Chesapeake Chapter of INCOSE is proud to recognize the following organizations for sponsoring our endeavors to expanding the understanding and appreciation of Systems Engineering in the local area:

Karl Geist Presenting Tutorial Solving the Systems Engineering Puzzle

We also attended a Saturday morning tutorial on May 14 provided by Karl Geist of the INCOSE Southern Maryland Chapter. The topic: "Solving the Systems Engineering Puzzle". Mr. Geist facilitated an interactive discussion that included real life examples of addressing the pitfalls associated with complex systems integration problems.

State of the Chapter

Ellie Gianni, ESEP

As we start the month of June I thought it would be a good idea to report on the state-of-the-chapter. Our chapter operations remain strong with many activities ongoing in parallel. Looking at the numbers, our membership has remained steady at today's count of 309 members.

A total of 48% (149) of our members are certified as ESEP (25), CSEP (99) or ASEP (25). We are on course to add 2 ASEPs, 4 CSEPs, and 4 ESEPs to our already large cadre of Systems Engineering Professionals this year, at a minimum.

We served more than 130 dinners at our 5 monthly dinner meetings from January through May. We had 560 individuals attend our monthly lectures.

We offered 3 Workshops and Tutorials at Johns Hopkins University Applied Physics Laboratory in Laurel with more than 37 attendees. We held 2 ESEP Summits with 12 attendees.

For the first time we sponsored the SEDC 2016 Regional Conference hosted by the WMA Chapter. We had 15 of our members attend the INCOSE International Workshop in Torrance, CA in January. 150 of our members participate in 57 INCOSE working groups, committees and initiatives at the international level. 9 of our members are chairs of these working groups, committees and initiatives.

We created and designed new business cards to now offer free of charge to our chapter members and forged new partnerships to provide value added services to our members.

The first partnership we established is with Tech Expo and Cyber Security Summit

Conferences. This partnership allows us to broaden employment opportunities for our members and encourages further sponsorship of our chapter from local employers that we are able to engage with at these conferences.

The second partnership is with CTI who has agreed to provide their industry-proven Systems Engineering Professional Certification training courses for us locally to minimize members commute time to reach this valuable training offering (next course offering is OPEN to everyone and being held at JHU APL in Laurel on June 13-17. Register here: http://www.certificationtraining-int.com/csep-preparation-course).

Congratulations to our members, Corporate Advisory Board members, corporate sponsors and friends of the chapter who continue to actively support the work of INCOSE. Our Chesapeake Chapter remains strong as our Board of Directors continues to work to bring you, our members and friends of the Chapter, the best speakers and professional training opportunities to strengthen and broaden your careers, organizations and businesses.

Lost at Sea
Latent Design Flaws in a USAF HC-130P Aircraft, Call Sign King 56

By George Anderson, ESEP

Systems thinking and the application of Systems Engineering (SE) processes are both necessary elements in the discovery and description of technical failures associated with some fatal aircraft accidents. The King 56 aircraft investigation was a fascinating search for forensic truth and I was part of the investigating team

My narration begins with the actual crash of the aircraft and covers highlights of a three- year period that ended with the completion of the USAF final report and its presentation to the Secretary of the Air Force.

I will not attempt to cover all details of the investigation, but focus on the investigative path taken that led to the final resolution. This path covers four distinct phases:

- Gathering data and creating scenarios or hypotheses,
- Testing hypotheses and discovering those best supported,
- Gathering physical evidence to establish or disprove the hypothesis, and
- Explaining the entire chain of causal events that contributed to the accident or mishap in the USAF terminology.

What Happened?

On November 22, 1996, USAF HC-130P, tail number 64-14856, crashed into the Pacific Ocean approximately 50 nautical miles west of Point Mendocino on the California coast. Ten of the eleven people on board died.

Based on the digital flight data recorder (DFDR) the accident sequence began at 1844 hours Pacific Standard Time (PST) and all four engines totally failed two minutes later at 1846 hours. After the loss, the aircraft descended without power but under control of the pilot until it impacted the ocean surface where it broke apart. The outboard wing sections and all four engines separated from the center wing section that in turn separated from the fuselage.

Subsequently, the engines and fuselage went straight to the ocean floor at a depth of approximately 5500 feet. The outer wing and the center wing sections floated on the surface for several days and sank more than 50 nm from the impact location.

What evidence did the investigators have initially?

The only survivor, the radio operator, had no substantive information about the operation of the aircraft systems. No relevant physical evidence was available but the last few minutes of flight before electrical power was lost was captured on the DFDR that had been recovered and its audio contents released to the public.[1]

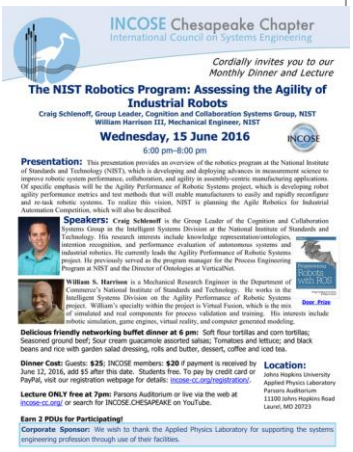
Gathering Data and Scenario Building

The DFDR was the only clue to how or why the engines quit. There were four avenues of approach taken initially for scenario building. These were:

- Fuel starvation due to mechanical malfunction or crew fuel mismanagement
- Electrical fault of unknown type
- Fuel contamination or improper fueling
- External electromagnetic field (e.g. a Pave Paws Radar operating near Marysville, CA)

The press had its own scenarios, several of which I have footnoted for perspective. [2]

Figure 1 HC-130P Tail Number 64-14856, Call Sign King 56



[1] DFDR Transcript

[2] Seattle Times, https://www.dropbox.com/s/lndd7pacw9gp2om/An%20Air%20Force%20cargo%20plane%20crashes%2080%20miles%20off%20the%20California%20coast.docx?dl=0

The USAF initially convened an accident investigation board to try and determine the cause. All the service records of the aircraft were searched for clues and plenty of items were found to be irregular but nothing that could establish enough evidence to support any of the created scenarios. Finally, the board formally concluded that the most likely cause was fuel mismanagement by the crew.

Shortly after this result was announced, the C-130 fleet was afflicted with multiple reports of C-130s of all types experiencing simultaneous power surges and rollbacks on all four engines. The confidence in the fleet was rapidly becoming a news story and Congress finally intervened and demanded that the USAF investigation be reopened.

In this climate of doubt, lawsuits were filed against Lockheed, the C-130 manufacturer, and Allison (now Rolls Royce) the engine manufacturer alleging defective design, manufacture and/or oversight of their products.

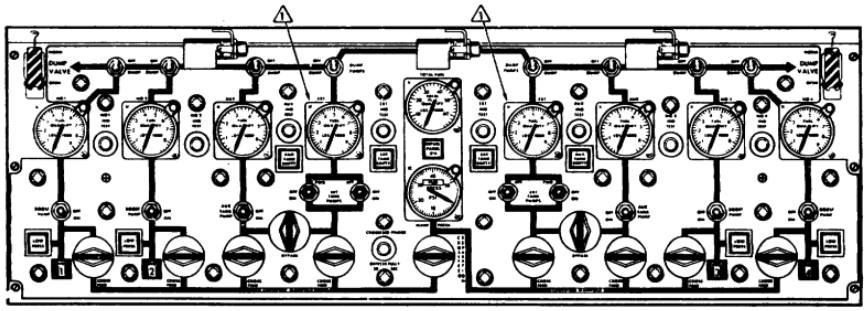


Figure 2 The Flight Engineers Fuel Panel

The result was that the USAF was directed by Congress to reopen the investigation and appointed me, an NTSB investigator, to serve on the team.

To obtain final closure on the cause of King 56's loss, more evidence was needed and would have to be recovered from the sea. Scenarios were created to identify possible failure modes that might have left evidence in the wreckage.

After several months of scenario building, I postulated that aeration of the fuel by an unknown condition might have caused the event. I suggested a test.

Two weeks later the Allison Engine representative reported to the Board that he had run a ground test on his own and found that the engine rolled back with just 5 psi of compressed air being injected into the fuel line.

From there, events quickly unfolded and a C-130 flight test at Nellis AFB, duplicated the symptoms. That is, they injected air into the common fuel manifold and observed that all four engines began to fail. The wisdom of undertaking this test notwithstanding, the scenario building now began to focus on how low pressure air could enter the fuel manifold.

After many dead ends, a source of pressurized air was found in the fuel system.

The aircraft was a rescue model and had two large auxiliary (Benson) tanks mounted in the fuselage to extend the range. Instead of venting these tanks to the outside air as was normally done, these tanks were vented to the interior of the cargo compartment. A pressurized aircraft in flight has a nominal pressure differential between the cabin and the outside air of 8 psi. This pressure would not pose a threat to the engines if both the fuel tanks contained fuel but if fuel was absent, the air would enter the fuel lines to all four engines under certain valve configurations of the fuel system.

How could this air reach all four engines? The short answer was for the flight engineer to not follow standard procedures for operating the many boost pumps used to transfer fuel out of the eight wing and two fuselage tanks to the 4 engines.

Our Tests showed that: (1) If all four main tank boost pumps were turned on as was directed by the flight manual, air from the cabin could not cause an engine flameout; and (2) If all four main tank boost pumps were off, then the engines would quit when either fuselage tank was run dry. The original accident investigation team was beginning to feel the road to vindication was getting shorter.

The next question was could recovery of fuel line components establish the state or configuration of the fuel system at the time failure? Very big stroke of luck here! The fuel system valves are all motor-driven using 28 volts DC. Because this power is lost when all four engines lose power, all fuel valves would be expected to remain in the last position selected by the crew.

For example, if the valves from a fuselage tank were found to be open then it strongly suggested that the flight engineer was feeding all four engines off that one tank.

Calculations of fuel burn rates indicated that if indeed this were the configuration selected after takeoff then the time of the power loss was consistent with a fuselage tank running dry.

Off we went to find the wreck. We boarded a research vessel equipped with a remotely operated undersea vehicle and a crew of salvage experts. We found the wreckage quickly and during seemingly endless 6- hour shifts we identified and retrieved parts of the wreckage. All the fuel valves we wished to examine were in the center wing section. It was raised once and broke free in heavy seas injuring several crewmembers. A second attempt using large chains was successful and we confirmed our hypothesis that the fuselage tank valve and others leading to all four engines were open.

The engineer's fuel panel was also recovered and many of the switches for the valves were inconsistently in the closed position. One can see in Figure 3 the ease of determining the status of each valve with a quick glance. This suggested that the crew had sorted out the problem but had repositioned the switches too late to save themselves.

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. It may wind up in a future issue of our Newsletter.

We had our answer but to be thorough we carefully tore down several engines and examined components that were part of other scenarios. There were no suspicious indications found.

The mission concluded after a confrontational scene in Portland, OR where the families of the dead crewmembers suggested that the investigation was all a lie designed to protect a defect in the C-130 fleet.

Actually, they were partially right but not for the reasons that they posed. The AF had never included a requirement in the C-130 design for air-starting an engine after all four engines quit. Other aircraft have this feature and it is sad that this crew was not given a second chance to recover from what was clearly a collective lapse of good airmanship.

References: http://fas.org/man/dod-101/sys/ac/docs/c-130-bar.htm
http://www.globalsecurity.org/military/systems/aircraft/hc-130p.htm

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Interested in Jobs & Networking

Contact Mark Kaczmarek at
mkaczmarekengr@comcast.net
Or attend one of the Tech Expo Events in our area:
https://www.techexpousa.com/

Event Report: May 12, 2016

Many of you may have noticed the new Tech Expo logo in our recent communications. The INCOSE BOD, in the interest of member's career development, attended the employment fair last month. We had the pleasure of meeting dozens of job seekers at the event. We would discuss the merits of the value-add of membership in our society through continuous career expansion and growth due to our dinner events and tutorials as well as material available at the national level. Please contact me at mkaczmarekengr@comcast.net if you are interested in staffing the booth at one of the upcoming events. CSEP's can receive PDUs for assisting the chapter.

Maryland BWI Marriott 2016 Events: June 15, August 10, September 22, October 12, November 16, December 8

Virginia Tysons Corner Ritz Carlton 2016 Events: June 30, August 11, September 15, October 13, November 3, November 15, December 7

Staffing the booth at the May TechExpo Event
L-R: James Hubble, Member at large; George Anderson, Past President 2016; Dave Alldredge, Past Treasurer; and Gundars Osvalds, Programs Director

DC / Metro Cyber Security Summit
Thursday, June 30, 2016 from 8:00 AM to 6:00 PM
The Ritz-Carlton Tysons Corner
1700 Tysons Blvd.
McLean, VA 22102
Register at http://cybersummitusa.com/dc-metro-2016/ with Promo Code INCOSE2016 to receive 50% a Full Summit Pass.

Chicago Cyber Security Summit
Thursday, August 25, 2016 from 8:00 AM to 6:00 PM
Hyatt Regency Chicago,
151 East Wacker Drive
Chicago, IL 60601
Register at http://cybersummitusa.com/chicago-2016/ with Promo Code INCOSE2016 to receive 50% a Full Summit Pass.

New York Cyber Security Summit
Wednesday, September 21, 2016 from 8:00 AM to 6:00 PM
Grand Hyatt New York,
109 E 42nd St.
New York, NY 10017
Register at http://cybersummitusa.com/new-york-2016/ with Promo Code INCOSE2016 to receive 50% a Full Summit Pass.

Los Angeles Cyber Security Summit
Thursday, October 20, 2016 from 8:00 AM to 6:00 PM
Loews Santa Monica Beach Hotel,
1700 Ocean Ave.
Santa Monica, CA 90401
Register at http://cybersummitusa.com/los-angeles-2016/ with Promo Code INCOSE2016 to receive 50% a Full Summit Pass.

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. It may wind up in a future issue of our Newsletter.

The Chesapeake Chapter of INCOSE is proud to recognize the following partner organizations and upcoming conferences that may be of interest to our membership.

HELP WANTED

MetaTech Consulting, Inc. is a woman-owned, veteran-owned, small business that has been providing advanced technology solutions and technical services to the Intelligence Community since 2002. Our experience includes:

- Engineering and Architecture from solutions up through the Enterprise
- Cyber Defense/Intel
- Cloud computing technologies and applications
- Data architecture and design services
- Technology research and assessment
- SETA/Acquisition support

Through a highly qualified, educated, experienced staff of engineers, MetaTech Consulting remains competitive in the consulting market. Candidates interested in working with this motivated and skilled team should have an advanced technical or engineering degree and not less than 8 years of experience producing information management solutions. As much of the targeted market sector requires access to information that is sensitive from a national security perspective, candidates should also possess a current TS/SCI clearance coupled with a full-scope polygraph.

Ideal candidates will also have experience in the following areas:

- Technical:
- Systems Engineering / Architecture
- Test and Evaluation
- Software Development
- Standards Development
- Policy Development
- Acquisition Support
- INCOSE / DAWIA certification desirable
- Mission Domain:
- Cyber Security and/or SIGINT

Qualified candidates interested in employment opportunities may send their resume to our Human Resources Department via one of the following means:

- Email: hr.dept@mtc-inc.us
- Fax: (717) 326-9691
- USPS: 3800 Lucille Thornton Place, Indian Head, MD 20640

What people are saying about Chesapeake Chapter in 2015:

"… What a wonderful, innovative, and impactful year for the Chesapeake Chapter. I hope you, your board, and the entire chapter is proud of what you have accomplished…"

Past President,
INCOSE

Events and Announcements

June 2016 Upcoming Dinner and Lecture. Scheduled Chapter meetings and Monthly Dinner Lectures take place at the Johns Hopkins University Applied Physics Lab (JHU/APL) in the Building 1 Cafeteria and Parsons Auditorium. Monthly membership meetings are held the third Wednesday of each month excluding December. Start time @ 6 pm for Dinner ($20 in advance / $25 at door) Meeting & 7 pm for Lecture (Free).

- **June 15 – 6 pm Dinner Meeting & 7 pm Lecture. "Agile Robotics for Industrial Automation",** Mr. William Harrison and Dr. Craig Schlenoff, National Institute of Standards and Technology (NIST). (1 PDU)

Other Upcoming Events

- **June 13 – 17 CSEP Test Preparation Training at JHU APL,** Montpelier Office Park, Building MP6 Room N111. $2868 per student. Register at: http://www.certificationtraining-int.com/event-registration/?ee=155 (40 PDUs)
- **July 27** – 6 pm Dinner Meeting & 7 pm Lecture. Dr. David F. Rico, PMI, CSEP. **"Business Value of Agile Organizations; Strategies, Models, & Principles for Enterprise-level Agility".** New Location this month ONLY! JHU/APL Building 200, Cafeteria & E100 Auditorium. (1 PDU).
- **August 17** – 6 pm Dinner Meeting & 7 pm Lecture. Thomas Heffner, Design Strategist and Dennis Smith, Innovation Projects Specialist. **"Design Thinking 101: What is Design Thinking and How Can it Help Your Organization Create a Culture of Innovation".** (1 PDU).
- Saturday **August 20** – **"Design Thinking – Learn the tools and methods of Design Thinking that will turn your organization into an Innovation powerhouse":** Tom Heffner & Dennis Smith. 8 am Continental Breakfast, Tutorial 9 am-12 pm, Lunch 12-1 pm, Tutorial 1-3 pm.
- Saturday **September 10** – 9 am – 12 pm, **"Beyond Thinking Outside the Box, For Entrepreneurs and Systems Engineers"**, Dr. Howard Eisner, Cost $100. (3 PDUs)
- **September 21**– 6 pm Dinner Meeting & 7 pm Lecture. Leonard Levine, Defense Information Systems Agency (DISA), **"DoD Perspective on UAF Data Models"**
- Tuesday and Wednesday **October 18 – 19**, James Martin, **"Systems Thinking Workshop"** 8 am – 4:30 pm, JHU/APL at MP6, 7651 Montpelier Road, Room N111, Laurel, MD 20723. (16 PDUs)
- **October 19** – 6 pm Dinner Meeting & 7 pm Lecture, James Martin, **"New ISO 42020 Standard for Architecture Processes"**. *[The next draft of this Standard will be out in September for comments that are due at the end of October. Please contact Ellie Gianni at egianni@verizon.net if interested in reviewing the draft and providing feedback].*

Scheduled Chapter Special Events (Engineers Club, Garrett Jacobs Mansion Baltimore, MD)

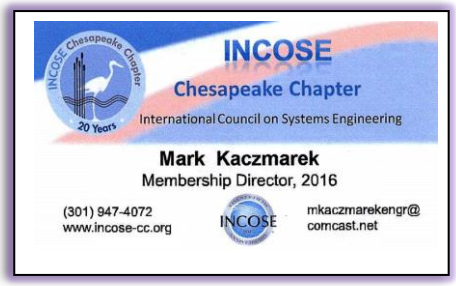
- August 24th – 7th Annual Systems Engineering Professionals (SEP) Gala. Guest

Speakers Courtney Wright, INCOSE Program Manager for Certification and Ms Kristen Baldwin, Acting DASD SE. Corporate sponsors are needed.
Please contact Gundars Osvalds, Programs Director (programs@incose-cc.org), if your company is interested in sponsoring this event.

- December 7th – Chesapeake Chapter Holiday Party and Awards Ceremony.

Chapter Business Cards

Please contact Mark Kaczmarek at the email address provided on the card to obtain your own Chesapeake Chapter business cards. Free to Chesapeake Chapter members.



Membership Arena

Mark Kaczmarek, Membership

The Chesapeake Chapter proudly welcomes our new members:

May 2016

- Jeffrey Corey, Asymmetrik Ltd.
- Anwar Kittrell, Northrop Grumman Corporation

April 2016

- Joseph Dougherty, Northrop Grumman
- Holly Jeffrey, Northrop Grumman
- Irving Pollard, SPAWAR
- Kristen Handy, Booz Allen Hamilton
- Alex Duda, Northrop Grumman

March 2016

- Christopher Couch, Northrop Grumman
- Eric Hiltpold, Jovian Concepts

February 2016

- John Shelton, Johns Hopkins University/APL

January 2016

- Grace Crowder, Department of Defense (DOD)
- Lauren Chance, Embry Riddle Aeronautical University
- Richard Day, Johns Hopkins University/APL
- Linnea Wright, Booz Allen Hamilton (BAH)
- Asia Morgan

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, Ellie Gianni or our Communications Director, Pat Williams. We value your feedback.

Board of Director Officers, 2016

- President: Mrs. EleanoraAnn "Ellie" Gianni, ESEP
- Past President: Mr. George Anderson, ESEP
- President Elect: Mr. Michael Pafford
- Treasurer: Mr. Tony Gigioli
- Secretary: Mr. Craig Tyler, ESEP
- Communications: Mr. Pat Williams, CSEP
- Programs: Mr. Gundars Osvalds, ESEP
- Membership Committee: Mr. Mark Kaczmarek