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Keep up with the latest news and events at our public **INCOSE TGCC Website**

To find TGCC Program presentations and other chapter information at **TGCC INCOSE CONNECT SharePoint** *(member's only)*

For any comments or suggestions about this newsletter please e-mail our Communications Director, **Kevin Orr**. *We value your feedback.*

For any other general comments, suggestions, or questions please email to **tgcc.incose@outlook.com**

President's Corner

Tony Williams, Antony.g.Williams@nasa.gov

As I look at the calendar and realize that we are in June, I am startled to realize the year is half gone! That makes this a great time for a "mid-term' evaluation and see where we are with the TGCC Focus Area.

2016 TGCC Focus Areas

Multi-industry representation within the chapter: We have seen an increase in membership including more from Oil & Gas, Aerospace, and delighted to see some student members. With the increase in diversity of the programs we are looking to continue to expand the industries represented within the chapter.

Multi-node programs with active participation: We have been delighted to be able to provide a couple of main locations for TGCC members and guests. Since we have been offering multiple node locations we have seen an increase in the number of participants at the programs, of course depending on the topic and which node the presenters are seem to reflect where the bulk of participation is. We have also seen interest in some others looking at the possibility of maybe a North node. We have also heard from presenters that that are delighted to know they are reaching out to various parts of the city, and even some presenters like the flexibility to pick the node they want to present from.

Newsletter: You are reading the second quarter edition and we always welcome your comments, articles, or topics of interest.

Increase Membership: We have seen an increase in membership as well as have had a couple more ambassadors' step up to represent INCOSE in their organizations.

Training and Certification Opportunities: We are still considering an offering of this, but looking for a volunteer to lead the activity.

Plans are dynamic – please let me know if you have questions, comments, or suggestions.

Regards,

Tony

TGCC Programs

Tim Brady, timothy.k.brady@nasa.gov

April 2016
Topic: Systems Architecting for a Retrofittable Subsea Application
Presenters: Jason Baker and Patrick Ferraioli, System Engineers at Transocean.

Our April Program brought in a good crowd at both nodes (West and South locations). We heard about how Jason and his team at Transocean was able to apply many of the System Engineering tenants in their Subsea application. It was delightful to hear they were given the opportunity, resources, and tool set to demonstrate a system engineering process from beginning to end. The team approached the project from both a top down and bottoms up simultaneously, which resulted in each function being able to inform each other throughout the process. They will be presenting at the INCOSE 2016 International Symposium in Edinburgh, Scotland on July 20, 2016, which you can follow at this link.

June 2016
Topic: Engineers without Borders
Presenters: Tom Bryan, Jonathan Koenighain, Mana Vautier, and Jake Mireles representing JSC EWB chapter.

Our June Program walked us thru how the local Engineers without Borders attack projects including a focus on generating a product using project management and system engineering processes. From a project management stand point they go through the normal project lifecycle of Stakeholder/Project approval, Assessment (includes visit to site to assess resources), Design, Implementation, and Closeout. From a System Engineering perspective they are concerned with system requirements (including local standards), design alternatives (keeping installation, maintenance and sustainment in mind), and confirmation the system works as intended. Projects are developed with a partner in the host country and generally involve a 5 year commitment. The JSC-EWB chapter is currently working on projects in Kenya and Thailand.

July 2016
Topic: System Engineering in Healthcare at MD Anderson Cancer Center
Presenter: Jeremy Meade and David Bivens from MD Anderson's Healthcare Systems Engineering Department.

August 2016
Topic: What do the terms Verification and Validation Really Mean?

Presenter: Lou Wheatcraft, from Requirements Experts

September 2016
Topic: Use of Analogs in Concept Definition
Presenter: Stan Love, NASA Astronaut

TGCC Communication

Kevin Orr, txorrhome@gmail.com

NEW: TGCC Twitter Follow us @tgcc_incose. This avenue will mainly be used for program announcements and cancellations. We do apologize for the late cancellation notices that came out for the May Program.

As always contact us at tgcc.incose@outlook.com for any other chapter questions/comments.

Membership at a Glance

Kevin Orr, txorrhome@gmail.com

At the beginning of 2016 TGCC membership stands at 85 active members. Current membership is at 93 active members

We would like to start by welcoming our seven newest members that have joined in the second quarter of 2016.

Welcome new members, so glad to have you and do not hesitate to contact us with questions.

Welcome
Diana Gallart Hamilton
Mathew Horstman
James Isaacks
Robert Perry
Kenneth Poteete
Chad Tressler
Chun Yau

Congratulations to our latest System Engineering Professional (ASEPs, CSEPs, and/or ESEPs), who completed the certification process this quarter.
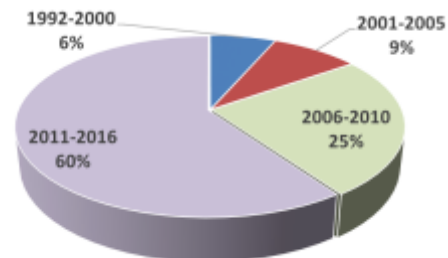
Congratulations to the two recent CSEPs added this quarter.

Barnabas Nemec
Seth Sherman

Did you know..

60% of TGCC members have joined in the last 5 years from 2011 to 2016.

1992-2000 6%
2001-2005 9%
2006-2010 25%
2011-2016 60%

To join/renew INCOSE see: INCOSE Membership And to join TGCC just select it as your chapter, no additional cost or commitments.
Note: Joining as a Corporate Advisory Board (CAB) member allows limited access and is not a chapter membership. Is your company a CAB member? Check here:
http://www.incose.org/ChaptersGroups/CAB

Spotlight– Diana Gallart Hamilton

Diana took out some time for us to "get to know" her.

Q: Why did you join INCOSE/TGCC?
A: I joined INCOSE because my research activity has come to rely heavily on Systems Engineering.

Q: What do you expect to get out of INCOSE/TGCC?
A: The opportunity to meet and learn from experienced practitioners inside and academics.

Q: How did you find out about INCOSE/TGCC?
A: I found out about INCOSE at Texas A&M University. Every course related to Systems Engineering I took included references to its publications. I learned about TGCC when I decided to join INCOSE.

Q: Has your Systems Engineering perspective changed since joining or being involved in INCOSE/TGCC? (thinking maybe your prior experience/knowledge defined System Engineering one way and INCOSE defines it a different way, or maybe INCOSE re-enforced your previous experience/knowledge)

A: It has evolved. What I've seen so far has complemented what I learned in school, both in classes and in my research. I joined very recently, so there is still a lot to find out, and I look forward to it.

Q: What has been your best project to use System Engineering on? (can be work, home, hobby, etc)

A: My research as a Ph.D. student was about Model-Based Systems Engineering for design, management, and governance of instrumented protective systems. It has special orientation to Process Safety Management, particularly to Management of Change.
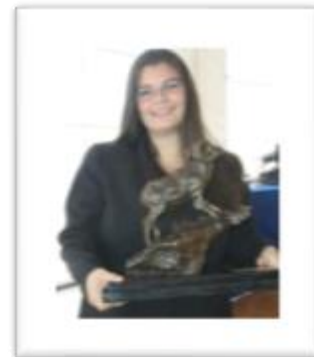

Diana participating in the 2014 Mary Kay O'Connor Process Safety Center International Symposium "Beyond Regulatory Compliance, Making Safety Second Nature" at the Hilton Conference Center in College Station, Texas.

Diana Gallart Hamilton Bio: Diana Graduated with Bachelor's degree in Financial Management from Tecnológico de Monterrey Campus Estado de México in 2004 and Master's in Finance in 2008. In the meantime, she worked as an auditor and consultant for an oil company,

obtained certifications in Business and Management and various modules of SAP, and contributed in a project with the Mexican Federal Government related to the energy sector. Later, she became a full-time professor. She teaches courses to both Business and Engineering students, so it made sense to expand education towards the Engineering field, in order to serve both audiences better. In 2012, she came to the U.S. to pursue a Ph.D. in Texas A&M University. While studying in the Industrial and Systems Engineering Department, she discovered

Diana receiving the "Borrego de Oro" award as best professor of the Business School, at Tecnolóogico de Monterrey Campus Estado de México, Mexico in 2012.

Systems Engineering, and thanks to the guidance and support of her advisor and her committee members, her interests materialized into the interdisciplinary research work she expects to complete and defend this year.

TGCC Highlights

Requirements Working Group

Lou Wheatcraft, louw@reqexperts.com

Lou Wheatcraft, from Requirements Experts, has been co-chair of the INCOSE Requirements Working Group (RWG) for the last 16 years. The RWG is the second largest INCOSE WG with 271 members! (Anyone know which WG is the largest?) The Chair is Mike Ryan, University of New South Wales in Canberra, Australia. The other Co-Chairs are: Kathy Baksa, Pratt & Whitney, USA; and Rick Zinni, Harris Corporation, USA.

The purpose of the RWG is to advance the practices, education and theory of requirements development and management and the relationship of requirements to other systems engineering functions. Our goal is to expand and promote the body of knowledge of requirements and its benefits within the systems engineering community. The scope of our activities includes addressing best practices for requirements development and management throughout the product development lifecycle.

Our members include requirements practitioners and educators, tool vendors, and participants in development of standards. Our members represent a diversity of experience levels, disciplines, domains, organizations, enterprises, cultures, and nations.

Our latest product for 2015 was a major update to the INCOSE Guide to Writing Requirements, which we released 2 years previously. This guide is available free to INCOSE Members. It and its companion summary document can be downloaded from the INCOSE Store.

You can go to these blogs to learn more about the guide.

- INCOSE Guide to Writing Requirements updates made at IW 2015

- Layers of Requirements above the System Layer
- Requirement Attributes – Part 1

At IW2016, we put together a framework for developing a new guide tentatively called the "Guide to Data-Based Systems Engineering" or "Guide to MBSE-A Data-Centric View". The basic premise for the guide is that SE is moving from a document based approach to a data based approach from which documents, drawings, models, etc. are just different views of this data. In the guide we plan to define levels of SE data capability: level 0: document based; level 1: moving information to a database, starting to use SE applications/tools to manage data, level 2: linking data together (allocation, traceability); level 3: using Functional Flow Block Diagrams (FFBD) and other diagrams to better understand the system to be developed and linking data together across all product development lifecycle; level 4: developing SysML models, level 5: developing a simulation capability. Each level of capability represents possibly different SE tools and a different set of skills to use those tools. Organizations need to assess which level best fits for them and then get the tools and develop the skill set needed that will result in their needed level of capability.

Also at IW2016 we reviewed and updated a list of features organizations should look for when selecting SE tool sets. Which features you need would depend on what capability level your organization wants to have. You can read more about these features in my blog: Features an SE Tool Set Should Have – Update 2. This blog also includes a diagram summarizing the Data-Based SE view.

Joining an INCOSE Working Group

Lou Wheatcraft, louw@reqexperts.com

To join any working group:
   1. Login to your account at INCOSE.ORG
   2. Click on the "Profile Home" link at the top of the page.

3. Scroll down to "My committees/Working Groups and click on the link "Browse/Join a Working Group"

4. This will result in a list of Working Groups. (For some reason the page says "Browse Committees". I guess they the page developers view Working Groups as Committees)

5. Scroll down until you see "Requirements" and then on the right click on the (view) link.

6. This will result in a roster of current WG members.

7. Scroll down to the bottom of the list and under "Committee Tasks" click on "Join this Committee"

Once you are a member of a Working Group, to access any Working Group or Chapter Web page, click on the INCOSE CONNECT link at the top of the page.