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These focus areas were initial thoughts from our Board members when putting together the strategic plan for this year, and were supported by the results from the TGCC Membership survey conducted in January.

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 return from the 2016 INCOSE International Workshop (IW), I am excited about the direction and energy I saw at the IW (see my notes in later article), and I'm even more excited about the local chapter. We are coming off a successful year, with some impressive programs. We've recruited an energetic and talented planning team, and we have a great plan for 2016. The planning team has created a vision for 2016 that consists of five inter-dependent focus areas:

2016 TGCC Focus Areas

Multi-industry representation within the chapter: Looking forward to engaging with existing and new

members from Aerospace, Energy, Healthcare and Automotive. As System Engineering is a rising discipline we are looking forward to interacting with various industries who perform SE and how we can all learn from each other. We are taking specific steps targeted to attract diverse participation.

Multi-node programs with active participation: We are among the forefront of INCOSE chapters experimenting with multi-node meetings. Given the size of the Houston metro-plex (and traffic), we believe that providing additional meeting locations will open up our

benefits to a far greater audience. (We are still looking for locations, especially in the IAH/North area, please let us know if you would like to sponsor a location for folks to meet as we would be delighted to support).

Newsletter: You are reading it ☺, and we always welcome your comments, articles, or topics of interest.

Increase Membership: Systems engineering is pervasive in the complex systems of 2016. INCOSE presents a unique value proposition, which we believe can and will benefit an increased and highly active membership. We want to leverage technology, multiple meeting locations, fascinating programs, the strength of INCOSE Technical Working Groups, and direct engagement by our planning team to effect this change.

We are looking for ambassadors for the chapter – these would be SEs that would provide a liaison to your organization for TGCC, distributing meeting invitations, and communicating the Chapter's opportunities within your domain. Please let me know if you'd be interested in being a TGCC ambassador!

Training and Certification

Opportunities: Still planning here, but stay tuned for opportunities for Webinar-based SEP training and special classes.

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

Regards,

Tony

Meet The TGCC Board

President - Tony Williams (ESEP,PMP)

Antony.g.Williams@nasa.gov



Company: Jacobs Engineering

Current Title(s): Chief Engineer, Systems Engineering and Integration, at Jacobs Engineering

developing flight systems for the International Space Station (ISS). He's also working on Ascent Abort 2 test of the Orion Launch Abort System

Years in SE: 28+

Favorite SE experience/project: Performing MBSE on ISS Simplified Aid for EVA Rescue (SAFER), a complex safety-critical jetpack that provides final self-rescue opportunity for a stranded astronaut who has drifted from the ISS.

Vice President - Robbie McAfoos (PMP,CSSBB)

robert.mcafoos@barrios.com



Company: Barrios

Current Title(s): Director and Program Manager for the International Space Station (ISS) Program, Mission and Program Integration (MAPI) Contract.

Years in SE: 20+

Favorite SE experience/project: The leader of a Barrios initiative which successfully established a business base in the Houston area oil and gas market.

Membership Director – Rafael Munoz

rafael.e.munoz@nasa.gov



Company: NASA

Current Title(s): Verification Lead in support of the Avionics, Power, and Software Office of the Multi-Purpose Crew Vehicle (MPCV)

Program

Years in SE: 25+

Favorite SE experience/project: Development of embedded real-time systems, from requirements analysis to system architecture, system design,

detailed hardware and software design, integration, validation and verification.

Secretary – Bob Gates (ESEP)

robert.e.gates@nasa.gov



Company: Booz Allen Hamilton

Current Title(s): Booz Allen Program Manager on the International Space Station (ISS) Mission and Program Integration

(MAPI) contract.

Years in SE: 23+

Favorite SE experience/project: Nuclear Event testing

Programs Director – Tim Brady

timothy.k.brady@nasa.gov



Company: NASA

Current Title(s): NASA Engineering and Safety Center's (NESC) Systems Engineering Office

Years in SE: 30+

Favorite SE experience/project:

Space Shuttle Orbiter Project Office as the Project Manager responsible for developing real-time tile damage assessment and on-orbit tile repair capability.

Communications Director – Kevin Orr (CSEP,PMP)

txorrhome@gmail.com



Company: GE Oil & Gas

Current Title(s): Senior Systems Engineer

Years in SE: 18+

Favorite SE experience/project:

Working requirement/verification activities on various projects where you really feel that you are making a difference to the end users safety and satisfaction of the system of interest, then validated by user/customer feedback.

Treasurer – Jeff HahnJeff.Hahn@jacobs.com

Company: Jacobs Engineering
Current Title(s): Section manager for the Crew and EVA Projects in the project development group.

Years in SE: 11

Favorite SE experience/project: Test engineer in the Unitary Tunnel and Mach 4 Blowdown Facilities in the Hypersonic Airbreathing Propulsion Branch at Langley Research Center.

Web Master – Robert Crain (CSEP)robert.k.crain@nasa.gov

Company: MEI Technologies, Inc
Current Title(s): Staff Engineer
Years in SE: 30+

Favorite SE experience/project:

Awarded a NASA Silver Snoopy

Award for his efforts related to the development of the ISS Flight Emulator, which was used to test ISS Elements on the Ground prior to Flight.

Past President – Ben EdwardsBenjamin.Edwards@jacobs.com

Company: Jacobs Engineering
Current Title(s): Senior Systems Engineer
Years in SE: 8+

Favorite SE experience/project:

Writing a Software Requirement Specification. The organization at the time had not seen a full blown software specification before. It was an eye-opening experience for everyone involved.

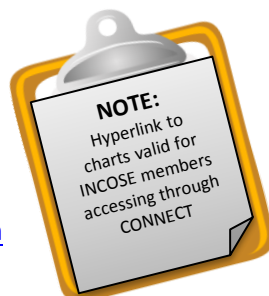
Find more information and Bios about the Board on the TGCC website at: [2016 Board of Directors](#).

TGCC Programs

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

January 2016

Topic: [MBSE principles on the International Space Station \(ISS\) Simplified Aid for EVA](#)



[Rescue \(SAFER\) Project for requirement validation and test planning.](#)

Presenter: Tony Williams

We kicked off the year by continuing to show examples of how Model Based System Engineering (MBSE) principles can be integrated projects. Our 2016 TGCC president Tony Williams presented how his team used

We also used the January program to test out the introduction of another meeting node location on the west side of town to reach out to other TGCC members, industries, and interested participants as The Texas Gulf Coast is a lot of territory to cover.



We do foresee in the future that node locations and quantities will change depending on need/interest.

March 2016

Topic: Project Design and Execution Challenges of Space Center Houston's newest exhibit: "Independence Plaza".

Presenter: By Mark Gill, Senior Project Manager at Jacobs Technology CLG.



At the meeting we heard an insider perspective on how multiple organizations came together to move the Shuttle Carrier Aircraft (SCA) from the airport to the current location at Space Center Houston. All started with normal planning and quickly moved into need for detailed information and parallel activities. Imagine trying to find old drawings and having to set up permanent parking for a Boeing 747 and avoid bad weather days. Also discussed topics on how the Shuttle was integrated on to the SCA and the connecting tower was built.



April 2016

Topic: Model Based Systems Engineering in the Oil and Gas industry.

Presenter: Jason Baker, Senior Systems Engineer at Transocean.

May 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.

June 2016

Presenter: Engineers without Borders

TGCC Communication

Kevin Orr, txorrhome@gmail.com

Are you aware of the different means of TGCC communication? Here is some insight for you.

[Public TGCC Website](#) – Access for anyone to view Program information as advertised, newsletters, some public presentations, Board of Directors, etc.

[Members Only INCOSE TGCC CONNECT Sharepoint](#) – Access for INCOSE/TGCC members only. Includes TGCC plans, other supporting chapter documentation, Surveys, Program presentations, etc.

TGCC email list – Anyone who is an INCOSE member that has selected TGCC as their chapter. Receive all TGCC information public and chapter specifics.

“Friends of TGCC” email list – Others that have expressed an interest in receiving TGCC information generally thru program participation. Also considered candidate TGCC members. Only receive public TGCC information.

tgcc.incose@outlook.com – generic email that is routinely monitored. Used for program RSVPs and general queries to/about the chapter.

[TGCC Linked-In Group](#) – Requires Linked-In account and request to join TGCC group. Used to advertise TGCC programs/public information as well as share System Engineering topics with others in the group.

Membership at a Glance

Rafael Munoz, rafael.e.munoz@nasa.gov

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

We would like to start by welcoming our newest members that have joined this first quarter in 2016.

Welcome

Christopher Laney
 Ashley Nelson
 James Ruiz
 Rachel Sliger
 Ian Still
 David Watson

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

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

We have had one recent SEP added this quarter, and we congratulate.



Reginald Mayo

Did you know..

35% of TGCC membership are active SEPs

7% increase in active TGCC SEPs just from 2015/2016

Over the course of other newsletters we would like to feature various members (new, seasoned, anniversaries, just because) if you have an interesting story to share just let us know at tgcc.incose@outlook.com.

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 CAB member allows limited access and is not a chapter membership.

Spotlight- Ashley Nelson

Ashley took out some time for us to “get to know” her.

Q: Why did you join INCOSE/TGCC?

A: I joined INCOSE to network with other systems engineers and essentially see how systems engineering is applied across industries. I really only know the programs I’ve worked on. And even with those, the way they apply systems engineering varies greatly.

Q: What do you expect to get out of INCOSE/TGCC?

A: To network with other systems engineers (and other engineers in other disciplines).

Q: How did you find out about INCOSE/TGCC?

A: I found out about INCOSE when I was living/working in Fort Worth. My company would put out a weekly newsletter, and it would occasionally have events by INCOSE. At the time, I was busy with a different industry organization, so joining didn’t seem like a good fit. But now that I’ve moved to Houston, I looked into a Houston chapter, and as luck would have it, there was a chapter here. And since I was no longer extremely active in the other org, I decided it was time to take the plunge and join INCOSE.

Q: Has your Systems Engineering perspective changed since joining or being involved in INCOSE/TGCC?

A: It hasn’t. I haven’t been a member that long. That would be weird if my perspective changed overnight. Nothing happens that quickly. Haha.

Q: What has been your best project to use System Engineering on?

A: Orion.

Q: Share something fun



Ashley standing in front of F-16 at Alliance Air Show in Fort Worth

Something fun: A friend I worked with in Fort Worth (and still regularly talk with) and I came up with a couple of acronyms for things we saw while working at LM, although I'm sure that these apply across the spectrum. You'll probably see them anywhere with bureaucracy. NLHS: Nothing Logical Here Syndrome (when people do things that defy logic, but are still in line with their job responsibilities). CBHS: Cart Before the Horse Syndrome (when people start doing things before they should or before other things are ready to get a jump on schedule).

Ashley Nelson Bio: I graduated with Bachelor's degrees in Mathematics and Electrical Engineering from the University of Texas at Austin in 2010. After graduating, I started my first job at Lockheed Martin Aeronautics in Fort Worth, in the Avionics System Test group for the F-16, FA-50, and T-X (the USAF trainer competition). While working, I earned Master's degrees in Systems Engineering and Engineering Management (yes, two). In 2014, I transferred to Lockheed Martin in Houston, doing requirements, verification, and integration for the Environmental Control and Life Support group. I am also a member of IEEE, AIAA, and ASEM.

TGCC Highlights

TGCC at INCOSE 2016 IW

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

I just got back from my second International Workshop, and I'm very excited! I travelled to the IW motivated in part by the desire to discover the secrets that I could steal to help make 2016 the most successful year ever for TGCC. And, while I did not find a single session titled "Chapter Success 101," I did encounter a huge amount of resources and ideas. And, as often is the case with INCOSE, the challenges is often just finding these ideas. I also had the opportunity to meet with a number of TGCC members (as shown in photo below), which was wonderful!



*Standing (L-R) Jason Turk, Lou Wheatcraft, Tony Williams, Tim Brady
Sitting: Courtney Wright, James Ruiz
Not Shown: Mary Tolbert, David Sheahan, and Conner Hayes*

Several key take-aways I did want to share:

1) The Technical Working Groups (WG) are an amazing resource that TGCC members under-utilize.

- We have three TGCC members that are also INCOSE WG members that we know of (let us know if we're wrong): Lou Wheatcraft, Bob Gates, and now me (just joined a few). Look for further WG activities/experiences in future newsletters.
- The Technical WGs cover a large range of areas of interest, and it is in these forums that the hard core practitioners work on their crafts, to include creation of products, communicating ongoing activities, and working on initiatives. Contrary to my expectation, these working groups do not require a lot of travel, instead they can be supported remotely in most cases. Click here for a [list of WGs](#).
- I really encourage you to take a look and explore membership in a group or two of interest. Furthermore, we at TGCC might want to think about creating a sub-group for WGs of particular interest. For example, how about a local group working on 'MBSE Infusion – how to inject MBSE elements into our current projects' (email me if you are interested in joining)

2) INCOSE Information Technology (Website and CONNECT) - They are making improvements, but have not been good about updating chapter leaders when they are done. A couple tid-bits.

- The “Help” function can be used to submit technical issues
- E-mail list – there is a recognized need to be able to communicate with some non-members as well – they are working on it.

3) “Golden Nuggets” - there are number of very useful products that INCOSE has created – such as the Guide to Requirements Writing that Lou helped create – but they are often hard to find. While INCOSE is working to make these products more available, I’ve also created a folder on your TGCC CONNECT site to capture some of these. So far I’ve posted several very good products relating to [Requirements Writing and Measurement](#).

TGCC Members

Are you an INCOSE Working Group Member?
If so let us know which ones, by email to
tgcc.incose@outlook.com.

TGCC Survey Says...

Ben Edwards, Benjamin.Edwards@jacobs.com

Earlier this year TGCC sent a survey to our members. Some of the results confirmed the suspensions of the Board and others were somewhat of a surprise.

Over three-quarters of the respondents indicated they would be more likely to participate if a teleconference was available. Good news! The goal is to have teleconference capability available for meetings that can support it (field trips don’t work so well). Video and telecon information are available on the [TGCC website](#).

Almost half liked the idea of a satellite location so you could still meet as a group and network while taking advantage of the local chapter meeting. We expected this result. The results for where to start were a bit scattered though. TGCC started a satellite location in the Energy Corridor area.

Please contact Kevin Orr for details. If you would like to start another location, please let Tony know so you can discuss it.

An overwhelming majority of you are interested in TGCC sponsored Systems Engineering classes. While we expected support for classes, the level of support was a surprise. The Board is working on how to support this desire so stay tuned for details. If you have any specific requests, opportunities, or contacts, please let Tony or Robbie know.

The results for the best time for meetings was a bit perplexing. In excess of half the respondents replied the timing discouraged them from attending meetings. Interestingly, a little more than half preferred the 5-7 pm time slot and Thursday was the day most people were available. A typical Venn diagram would likely indicate that Thursday evening was the best time but sadly, most folks can’t make it then. The programs for the next couple of months are already set up. However, we are looking at the possibility of something besides the normal Thursday evening time slot to support our members schedules.

In the spirit of Jeopardy, “An interesting topic” was the answer 100% of the time when questioned “What is the number one factor that encouraged TGCC meeting attendance?” This is where we need your help. If you have a topic that you think will be of interest to the chapter, or if you have a topic you want presented, please contact the Programs Chair, Tim Brady.

Thank you to everyone who participated in the survey. We hope the addition of telecon support and a satellite location will encourage more members to participate in our local meetings.

Stand by for details on educational opportunities or different meeting times. As always, if you have an idea for the program, please let the Program Chair know.

Find more information on the survey results see the TGCC INCOSE CONNECT Sharepoint at [2016 Survey](#).

TGCC Volunteers

Bob Gates, robert.e.gates@nasa.gov

Ever wonder what you can do as a TGCC member to volunteer? Feel free to attend the planning meetings, to find out more.

There are many opportunities...

- Be a TGCC ambassador
- Represent TGCC at other conferences you may already be attending
- Lead/Participate in TGCC sponsored projects
- Present SE topics (to other orgs, schools, businesses, etc)

I recently had the opportunity to represent INCOSE at the Boeing Sponsored Engineers Week. Various representatives (AIAA, Tech Fellows, SWE, etc) had a table where employees were encouraged to take time out of their busy day and learn more about the professional societies/organizations that were represented. INCOSE table shown in photo.



The topic that I enlightened most folks with was that INCOSE has a certification program to certify System Engineering Professionals, as they were not aware of it.

We know others companies are very active during engineering week and provide participation in various ways, if you think your company would support/benefit from an INCOSE/TGCC representation feel free to let us know and we can provide material for you or maybe find a volunteer to represent.

TGCC Chapter Award

Did you know that INCOSE chapters are encourage and incentivized to participate in a chapter awards (Platinum, Gold, Silver, and Bronze) program to:

- Recognize achievements at the chapter level;
- Clarify and incentivize desired activities and behavior at the chapter level;
- Improve sharing of good and best practices between chapters; and
- Encourage effort and innovation in serving INCOSE members at the local level.

For 2015 TGCC applied for Silver status, and stay tuned for results.

See previous years status for TGCC.
Maybe 2016 is the year to go for GOLD??

Please contact TGCC at tgcc.incose@outlook.com if you would like to know more about how to achieve more points for the chapter or would like to volunteer to lead/participate in one of the award type initiatives.

2016	GOLD?
2015	??
2014	Bronze Chapter Award
2013	Silver Chapter Award
2012	Bronze Chapter Award
2011	Silver Chapter Award
2009	Silver Chapter Award
2007	Silver Chapter Award