



Transportation Working Group **Bi-Monthly Meeting**

September 09, 2015

Meeting minutes (1)

General announcements

- APTA Annual Oct 4th-7th
- APTA Rail, June 2016, Phoenix, AZ
- HS2 in the UK is hiring globally. Systems Engineers with RAMS, assurance, configuration mgmt., BIM/MBSE. Contact Nita if you're interested (nitarabadia@hotmail.com)
- Roundtable/paper – Nita presented at the Association for Consultancy and Engineering (ACE) on systems thinking. Nita will be seeing if ACE members would be interested in attending IS16.

Initial IS16 planning

- Bill G and Allison R at NYCT still considering paper on *Requirements Engineering*, and will confirm in October
- Oliver H and Steve Turner have started a paper on *Combination of PM and SE*
- Tim Stokes – paper on *Current Systems Engineering Gaps in Delivery of Rail and Transit Public Infrastructure Projects*, working on abstract with Brian B and Simon
- Jean Souza, considering a paper on *Implementing SE on a large scale infrastructure project*
- Panel – infrastructure/TWG joint panel – *V&V from the perspective of an owner and an implementer*
- Panel – *Business case for SE and Cybersecurity/safety standards*, could both be good cross-industry panel topics. Automotive is looking at this too, plus all other new industries. Dale Brown to arrange through IOB.
- Technical tour – Edinburgh-Glasgow railway site visit Network Rail. **Nita Rabadia** to contact Paul Davies.
- General tips
 - It is helpful to identify a part of the system lifecycle to focus on when writing a paper

Meeting minutes (2)

Actions from IS15

- IW 16 planning
 - **Simon Smith and Jenn Russell** to start IW16 planning
 - Discuss with Anne O about APTA attendees and synergies between topics
 - APTA SE subcommittee has three initiatives underway, so can IW16 align with this?
- Formalizing relationship between APTA and INCOSE
 - David Springstead discussing with APTA
 - At the past 3-4 APTAs we've had good INCOSE attendees/promotion, so this growing
- TWG outreach
 - **Nita Rabadia and Jenn Russell** to update TWG Outreach plan to align with IOB outreach
- TWG Administration
 - **Malcolm Thomas** to set-up meeting on website updates, mailing list administration and what products go to which people
 - **Nita Rabadia** to have a discussion with Andrew Mark (former TWG steering committee member)
- TWG member services (webinars)
 - We have a TWG YouTube channel for TWG webinars, we have three webinars uploaded – **Konstantinos/Jenn Russell** to promote channel on LinkedIn
 - We have 14 other agreed webinars – now need to start getting these recorded and uploaded
 - Add to the list: John Gaul and Mikael presentation at APTA
 - Can we have the UK Rail Interest Group (RIG) presentations recorded and uploaded?
- Collaboration between INCOSE/TWG and Building SMART around BIM
 - **Nita Rabadia** to discuss with Paul Davies
- Getting more tech reviewers for INCOSE papers
 - **Dale Brown** to identify technical reviewers for INCOSE papers

Meeting minutes (3)

Roundtable planning

- Roundtable is aimed at sharing best practice and exchange of best practice
- Would need agencies who can speak to their practices
- V&V across contractual boundaries – Nita?
- Interdependencies and links PM, SE (and QA). Typically are arranged in a separate silos. – Laura Uden?
- Need agency participation
 - HS2/Network Rail – quite mature for PM/SE
 - NYCT – emerging for PM/SE
 - Transport Scotland
 - Highways England
- **Simon Smith** to form mini working group to agree roundtable
- Can we use LinkedIn to promote/ask for ideas?

AOB

- Laura Uden seeking collaborators on PM/SE integration book for PMI
 - Jenn Russell offered
 - Dale Brown offered
 - Simon Smith offered to review content
 - Bill Gleckler interested to be kept in the loop
- Next TWG at-large meeting for week Oct 21st @ 230pm EST – **Simon Smith** to send invite

Agenda



- General Announcements 5 min
- Networking & Career Opportunities Exchange 10 min
- Discuss Status of Paper prospects for IS2016 20 min
- Status of Open Actions from IS2015 Meeting 20 min
- Steering Committee Reports 15 min
- PMI – INCOSE – MIT Book – Update (Laura) 10 min
- Other Business? remaining

IS2016 Paper Prospects

Getting ready for Edinburgh: Which brainstorming topics would make good papers? (*Nov 08 Deadline*)

(Brian Berenbach: Volunteered to coach anyone writing a paper)

- Bill Gleckler and Allison Ruggiero: **Requirements Engineering topic** (Brian Berenbach can help or co-author)
- Oliver Hoehne: **Combination of PM and SE.**
- Dale, Laura and Nita: **QA and SE interplay.**
- Dale and Alex: **Business case for SE**
- Brian Berenbach: **Webinar on paper writing**
- Ken Capshaw: **Webinar on cybersecurity standards for digital architecture and how they affect transportation SE.**
- Paul Davies and Nita: **Technical tour of concurrent design of the Edinburgh-Glasgow rail improvement project.**



Open Actions from IS2015

- A. **ACTION:** TWG co-chairs and outreach leads to work with IOB industry ambassadors to explore opportunities for agency attendance and participation at IW2016.
- B. **ACTION:** Nita and Jenn to update TWG Outreach plan to align with IOB outreach plan.
- C. **ACTION:** Dale will ask David Springstead (head of APTA SE subcommittee) about how to approach formal relationship between APTA and INCOSE
- D. **ACTION:** Nita to work with Malcolm Thomas and Dale to determine how to administer TWG member mailing list and determine what products are available to members vs. general public.
- E. **ACTION:** Rianne, David Rojas and Constantinos to develop webinar schedule for the next 6-12 months and provide to Nita.
- F. **ACTION:** Simon to follow-up with Paul Davies to seek funding for agency presenters registration fee.
- G. **ACTION:** Paul Davies get MOU with Building SMART to have dialog about SE and BIM.
- H. **ACTION:** Dale to identify paper reviewers prior to INCOSE deadline and manage the reviews.
- I. **ACTION:** Co-chairs to identify IS2016 round table topic.
- J. **ACTION:** Anne will develop template for INCOSE TWG invitation letter from co-chairs to key agency leaders. And work on sending out.

Steering Committee Reports

1. Administration (Malcom)
2. Outreach (Jenn, Jean)
3. Industry Ambassadors (Anne, Lilanthi)
4. Member Services (David R., Rhianne)
5. UK RIG Liaison (Bruce)
6. Transit Liaison (David S.)
7. Supplier Liaison (Konstantinos)
8. Highway Liaison (Alan)

Brainstorm Industry Themes & Challenges



(to identify themes for papers, webinars and bi-monthly discussions)

- Bringing awareness of SE into an institution / introducing SE and providing business case of SE.
- Need tailored process for translation of conops to systems requirements for transportation. Bill G. and Brian B. to be on panel?
- SE management to integrating many disciplines for rail systems/ unique and common. SE capability across supply chain needs to be increased now that agencies are recognizing need. Domain and systems experience is much more effective than just knowing one. Building pool of SE capabilities and competencies. PM, QA and SE and how they relate to each other. PMI and INCOSE will author handbook and Laura U can provide input into book. CAB top initiative is competencies (e.g. in rail) and domain engineering perspective and development path. There is money available for that.
- General managers can come to learn about link between asset management and SE. Need business case for value of SE.
- Validation across contractual boundaries

Brainstorm Industry Themes & Challenges (continued)



(to identify themes for papers, webinars and bi-monthly discussions)

- Handover of SE process from owner to contractor
- Intermodal transfer as systems challenge
- Requirements engineering for rail systems (what help is needed)
 - Contract requirement definition
 - Compliance Management (system with contract)
 - Management of regulatory requirements (push down to subs)
- PTC/ERTMS is a systems issue.
- How do you get interfaces validated when doing concurrent design across contractual boundaries?
- BIM and MBSE. Do we have common definition of BIM? Need one source of truth of all stakeholders to reference.
- Cyber security standards and how they affect transportation SE.

2016 TWG Steering Committee



Simon Smith
Co-chair
IBI Group, USA



Dale Brown
Co-chair
Atkins, USA



Nita Rabadia
Co-chair
Network Rail, UK



Jenn Russell
Outreach
PB, USA



Jean Souza
Outreach
Stellar Services, USA



David Rojas
Member Services NA
SF MTA, USA



Rhianne Evans
Member Services EU
University of B'ham, UK



Bruce Elliott
UK RIG liaison
Arbutus, UK



David Springstead
Transit liaison
MARTA, USA



Malcolm Thomas
Administration
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Konstantinos Vilaetis
Supplier Liaison
NY Airbrake, USA



Alan Benson
Highway liaison
Caltrans, USA