

INCOSE Patterns Working Group: Meeting Minutes

Meetings: July 12-13, 2015, meetings of INCOSE Patterns Working Group, during IS2015, also via web conferencing.

Meeting Participants:

(**) = co-chairs of working group

First Name	Last Name	Affiliation	email	Jul 12	Jul 13	by Internet
Jens Christian	Andersen	Novo Nordisk A/S	jcta@novonordisk.com	*		
Eileen	Arnold	UTC Aerospace Systems	Eileen.Arnold@utas.utc.com	*		*
John	Artus	Lockheed Martin Aeronautics Co.	john.g.artus@lmco.com		*	*
Gael	Blondelle	Eclipse/PolarSys	gael.blondelle@eclipse.org	*		
Mark	Burrell	The Procter & Gamble Company	burrell.m@pg.com		*	
Kurt	Colvin	Cal Poly, San Luis Obispo	kcolvin@calpoly.edu	*	*	*
David	Cook	Moog Inc	dcook@moog.com	*	*	
Rebecca	Deschamp	NASA, Stennis Space Center	rebecca.e.deschamp@nasa.gov		*	*
Jean-Luc	Garnier	Thales	jean-luc.garnier@thalesgroup.com	*		
William	Hnat	Self	aerobas1@aol.com	*	*	*
Chris	Hoffman	Cummins	christopher.d.hoffman@cummins.com	*		
Jon	Holladay	NASA	jon.holladay@nasa.gov	*		
Malcolm	Lunn	Ford Motor Company	lunmalcolm@me.com	*	*	*
Brian	Merchant	Moog Aircraft Group	bmerchant@moog.com	*	*	
Tim	Petersen	Rockwell Collins	tim.w.petersen@rockwellcollins.com		*	*
Troy	Peterson (**)	Booz Allen Hamilton	peterson_troy@bah.com		*	
Andy	Pickard	Rolls-Royce	Andrew.C.Pickard@rolls-royce.com	*		
Samuel	Rochet	OBEO	samuel.rochet@obeo.fr		*	
Randall	Russell	Eli Lilly & Company	russell_randall_w@lilly.com	*		
Saumya	Sanyal	K2Firm	sksanyal@visi.com	*	*	
Bill	Schindel (**)	ICTT System Sciences	schindel@ictt.com	*	*	
Galen	Shi	Eli Lilly & Company	galen_shi@lilly.com		*	
Geoff	Shuebrook	Self	shuebrook@att.net	*		*
Michael	Spoth	Moog Aircraft Group	mspoth@moog.com		*	*
Dan	Stege	Ssprings Design Svc, LLC	Stege.Daniel@gmail.com		*	*
Rick	Steiner	Skygazer Consulting	rick@ricksteiner.net		*	
George	Walley	Ford Motor Company	gwalley2@ford.com		*	
Scott	Workinger	Workinger Consulting	scottworkinger@gmail.com		*	
Mike	Zabat	Booz Allen Hamilton	zabat_michael@bah.com		*	

Summary: (additional details later below)

1. Working Group and INCOSE Web Site: The (continuing) MBSE Patterns Challenge Team is now also called the MBSE Patterns Working Group, as a part of the INCOSE MBSE Transformation, and now our (continuing) INCOSE-OMG MBSE Initiative web site can additionally be reached through the new combined listing of INCOSE WGs on the new INCOSE web site.
2. S*Patterns: A brief summary of the nature and use of S*Patterns was reviewed, also described by the PBSE Methodology Summary which has been submitted by our WG for INCOSE posting with the other summarized MBSE methodologies.
3. Wave 1 Projects: Five members summarized their IS2015 papers related to S*Patterns, one of which received IS2015 Best Paper recognition.
4. Wave 2 Projects: Five new sub-team projects related to S*Patterns are underway, of which four were discussed by their owners. Individuals and organizations are encouraged to join these sub-teams.
5. Approaching 2015 Conferences: Members have submitted or are planning submissions for additional 2015 S*Pattern-related presentations at NDIA GVSETS (August), INCOSE GLRC 2015 (October), and IEEE EnergyTech 2015 (December).
6. Wave 3 Project Candidates: Candidate pipeline projects were discussed by members for potential future action by this Working Group, including joint projects with other INCOSE WGs. Owners or participants will be needed to make them go.
7. Next Meetings Schedule: Sub-teams will make their own work session schedules, and report status to the overall WG, which will meet several more times during 2015, on a schedule to be provided.

Details:

8. INCOSE MBSE Transformation: Troy Peterson, co-chair of our working group, has been appointed to lead the MBSE Transformation, directed by the INCOSE Board of Directors, as announced earlier this year. Refer to <http://www.incose.org/about/strategicobjectives/transformation>
9. WG Status and Web Site: In coordination with the MBSE Initiative leaders Sandy Friedenthal and Mark Sampson, at IS2015 Troy Peterson announced that each of the Challenge Teams and Activity Teams of the (continuing) MBSE Initiative are now also considered regular INCOSE Working Groups (WGs). The new INCOSE web site has been updated to show all the WGs together, and to in turn link to the (continuing) OMG-INCOSE joint MBSE wiki web site, which continues to host the individual web sites of the Challenge Teams and Activity Teams. Refer to <http://www.incose.org/ChaptersGroups/WorkingGroups/mbse-initiative>
10. S*Patterns—Their Nature, Use, and Examples: The focus of this WG is on MBSE-based S*Patterns. The nature, use, and examples of these were reviewed using meeting materials. Refer to http://www.omgwiki.org/MBSE/lib/exe/fetch.php?media=mbse:patterns:pbse_wg_meeting_slides_july_12-13_2015_1.2.2.pdf
11. Wave 1 Projects: S*Pattern-related IS2015 papers were summarized by their Patterns WG authors:
 - Automated Test in Safety Critical Systems: D. Cook et al, Moog Aerospace
 - Reducing Error Escapes in Safety Critical Control Systems: A. Pickard et al, Rolls-Royce
 - Automated Ground Vehicles: T. Peterson et al, Booz Allen Hamilton
 - MBSE Across the Enterprise: S. Sanyal et al, K2
 - Tracking System Trajectories: W. Schindel, ICTT System Sciences

The related papers may be found in the IS2015 conference proceedings:

<http://events.incose.org/program#eproceedings>

12. Wave 2 Projects: Status of the current crop of project on MBSE patterns, some jointly with other INCOSE teams:

- PBSE Methodology Summary our team collaborated to prepare earlier this year has been submitted to INCOSE to post with the survey of INCOSE MBSE methodology summaries. Refer to: http://www.omgwiki.org/MBSE/lib/exe/fetch.php?media=mbse:patterns:pbse_extension_of_mbse--methodology_summary_v1.5.5a.pdf
- Agile Systems Engineering Life Cycle Model (ASECLM) Project is a joint activity with the Agile Systems Working Group, led by Rick Dove and several co-leads, including Bill Schindel from our WG. See <http://www.parshift.com/ASELCM/Home.html> The project is developing and validating an S*Pattern representation for the ASELC Pattern. See http://www.omgwiki.org/MBSE/lib/exe/fetch.php?media=mbse:patterns:intro_to_the_agile_systems_pattern_glrc_2015_v1.2.1.pdf The 2015-16 workshop sites are being established across North America and Europe, beginning with the following initial workshop sites and host organizations:
 - Aug 05-07, Navy SPAWAR/MITRE in San Diego, California
 - Aug 26-28, Northrop Grumman in Mclean, Virginia
 - Sep 21-23, Rockwell Collins in Cedar Rapids, Iowa
 - Oct 20-22, Lockheed Martin, Fort Worth, Texas
- Systems Engineering Social Network Pattern Chris Hoffman, Cummins, described an “SE Community of Practice Social Network S*Pattern” being developed, and invited other interested participants to join in this work. Chris is planning a related GLRC2015 presentation for October, and an IS2016 paper.
- Health Care Reference Pattern (Vijay Thukral, Cientive). Bill Schindel summarized work underway by Vijay Thukral, Cientive, to develop a reference model with special focus on improving Electronic Medical Records. Vijay is coordinating this with the Health Care WG through Ajay Thukral, and planning an INCOSE GLRC2015 presentation.
- Electrical Power Systems Reference Pattern: (John Juhasz, Telepath) This S*Pattern will be presented during a related tutorial at the IEEE-INCOSE Energy Tech 2015 Conference in December.

13. Approaching 2015 Conferences: Sessions on S*Patterns, the S*Metamodel, and PBSE will be presented by members of our WG at 2015 conferences that members are encouraged to attend:

- NDIA GVSETS (August, Detroit):
<http://www.ndia-mich.org/index.php/events/gvsets>
- INCOSE GLRC 2015 (October, Cleveland):
<https://www.regonline.com/register/login.aspx?eventID=1680196#>
- IEEE EnergyTech 2015 (December, Cleveland):
<http://www.energytech2015.com/>

14. Wave 3 Project Candidates: Members discussed potential next (Wave 3) projects of interest to them for this working group. Interested project leaders or participants are sought:

- Library of S*Patterns: Discussed by George Walley, Ford.
- Library of key physical science S*Patterns: Discussed by Mark Burrell, Procter & Gamble.

- Joint project with System Science Working Group: Discussed by RW Russell. (James Martin, chair of SSWG, later briefly visited this meeting and suggested a project in connection with mapping S*Patterns into OPM (object process methodology)).
- Example implementation of an S*Pattern in a PLM System (discussed by Saumya Sanyal).
- Archetypes of MBSE Implementation Strategies—INCOSE aids in the form of archetype MBSE adoption strategies are being discussed in the MBSE Transformation (Bill Schindel)
- Example Product Line Engineering (PLE) Pattern (Joint with PLE WG): A joint project is under discussion with the PLE Working Group (Hugo Guillermo Chale Gongora)
- Supporting INCOSE objective for SE as model-based; the Case for Stronger MBE Metamodel / Underlying Semantics (Bill Schindel) See also:
http://www.omgwiki.org/MBSE/lib/exe/fetch.php?media=mbse:patterns:got_phenomena_glrc_2015_v1.2.5.pdf
- Other candidates previously suggested by members, not discussed in this meeting:
 - Mapping to COTS Tools and Information Systems
 - Mapping to ISO 15288
 - Example SOS Pattern (Joint with SoS WG)
 - Example Space Systems Pattern (e.g., CubeSat; Joint with Space Systems WG)

Action Items:

15. PBSE Methodology Summary: Follow through with INCOSE leadership on INCOSE posting. (Bill Schindel)
16. Outreach: Follow up with other WGs on potential joint projects using PBSE (all members)
17. Support the four Wave 2 Projects' sub-teams (Sub-team members, Bill S.)
18. Identify to Bill Schindel your interests in participation in candidate Wave 3 projects above (all members)
19. Schedule remaining 2015 meetings of the overall WG (Troy Peterson, Bill Schindel).

References:

20. General web site for Patterns Working Group, charter, meetings listing, etc.:
<http://www.omgwiki.org/MBSE/doku.php?id=mbse:patterns:patterns>
21. July 12-13 meetings agenda, materials, at:
http://www.omgwiki.org/MBSE/doku.php?id=mbse:patterns:patterns_challenge_team_mtg_07.12-13.15