Meeting Minutes

Meeting: June 29-30, 2014, two-day meeting of Patterns Challenge Team of MBSE Initiative, at INCOSE IS2014, Henderson (Las Vegas), NV, USA, plus remote dial-in attendance.

Participants:

(**= co-chairs of challenge team)

Name		Affiliation	Email	Day 1	Day 2	Dial-In
Arnold	Eileen	UTC Aerospace Systems	eileen.arnold@utas.utc.com		*	
Berg	Eric	Procter & Gamble	berg.ec@pg.com		*	*
Cloutier	Rob	Stevens Institute	robert.cloutier@stevens.edu		*	
Denman	Steve	IBM			*	
Dove	Rick	Paradigm Shift International	dove@parshift.com	*		
Dvorak	Dan	NASA / Cal Tech JPL	daniel.l.dvorak@jpl.nasa.gov		*	
Mays	Shane	Procter & Gamble	mays.rs@pg.com	*		
Nalluri	Siva	Siemens PLM Software	sivarama.nalluri@siemens.com		*	*
Peterson (**)	Troy	Booz Allen Hamilton	peterson_troy@bah.com	*	*	
Qureshi	Khurshid	Dassault Systemes	khurshid.qureshi@3ds.com		*	
Riley	Tom	Thales UK	thomas.riley@thalesgroup.com		*	
Rogers	Dave	Rolls-Royce	david.rogers2@rolls-royce.com		*	*
Sanyal	Saumya	K2Firm	sksanyal@visi.com		*	
Schindel (**)	Bill	ICTT System Sciences	schindel@ictt.com	*	*	
Stege	Dan	John Deere	stegedanielk@johndeere.com		*	*
Valinoto	Tamara	Northrup Grumman Corp.	tamara.valinoto@ngc.com	*		*
Vinarcik	Michael	Booz Allen Hamilton	vinarcik_michael@bah.com	*		
Zwemer	Dirk	interCAX	dirk.zwemer@intercax.com		*	*

Summary (over two days):

1. This was the second meeting of the Patterns Challenge Team (first meeting was IW2014), based on the formation draft Charter. The meeting was held spread over two days for convenience of different on-site IS2014 conference and remote dial-in attendees (June 29-30).

2. We discussed the nature of model-based S*Patterns upon which this team is focused, reminding team members of the scope, nature, and typical applications of S*Patterns.

3. Team members discussed goals for the remainder of the calendar year, focused on certain target system patterns of interest to them, with the aim of one of more papers to be available for IS2015.

4. A tentative project schedule, rate of progress, and rate of team web meetings for the rest of 2014 were discussed.

5. Follow-up contact will be used to firm up the specific dates and times of the related web meetings to follow.

Details (over two days):

6. A key perspective of this team's work is its use of S*Patterns, the nature of such patterns, and the scope they will typically cover:

   a. Emphasized in Charter and both team meetings to date. (See also meeting slide examples.)

   b. The scope of S*Patterns as most typically applied covers _entire systems, not just smaller-scale element design patterns within them_. For this reason, the typical scope of S*Pattern applications may be thought of as re-usable, configurable models of whole domain or platform systems—whether formal platform management is otherwise being recognized or not. (Nothing prevents the use of S*Patterns to describe smaller-scale reusable patterns, but the application emphasis has been and remains whole domain or platform systems, whether in formal platform management environments or otherwise.)

   c. These are _model-based_ patterns. Specifically, these patterns are configurable models based on the S*Metamodel.

   d. There is a respected history in civil architecture, software, and systems engineering of the use of patterns which are _not explicitly system model-based_ (different than (d) above) or which address _smaller-scale aspects of systems_ (different than (c) above).

   e. We have noted this connection and difference in each meeting and the related materials back through the INCOSE 2005 PBSE tutorial, but agreed with Rob Cloutier's suggestion in this meeting that this point be further emphasized in the web site. These other activities are respected, related to, but differentiated from this team's scope. The term "pattern" is not exclusively owned by tailors, machine-tool makers, statisticians, software engineers, city planners, scientists, or the many others who identify and make productive use of systemic regularities found in the systems of nature and human endeavor.

   f. It was likewise noted in the January meeting of this team (see minutes) that S*Patterns can similarly be considered a superset of architectural frameworks.

7. Although the Charter for this team listed six potential types of deliverables, team member interests have focused on one of these (construction of specific patterns) in the initial efforts of the team. The patterns so suggested within this team have come from three sources:

   a. The Charter emphasized a manufactured system product family of some specific type, along with its related manufacturing system; this was to illustrate the cross-domain emphasis requested by the MBSE Initiative leadership during the chartering process.

   b. Four other candidate system patterns that were suggested by team members during the January meeting of the team, at IW2014. Refer to the January 2014 minutes for details.

   c. Four additional candidate system patterns that were also suggested by INCOSE members during the period between the IW2014 and IS2014 meetings of this team, discussed in the June meeting slides and below.

8. Our goal is to make enough progress in the balance of 2014 to generate one or more IS2015 papers, as had been requested by MBSE Initiative leadership during our chartering. Bill offered assistance to any individuals or sub-teams during this period, in the form of a regular schedule of periodic web-based pattern review and feedback meetings during the balance of 2014.

9. Over its two days, this meeting included an effort to assess member interest in pursuit of each of the candidate patterns that had been proposed by the same members to date, with these results:

    a. A Manufactured Product Pattern and associated Manufacturing System Pattern: Bill confirmed he continues to generate this and remains committed to this deliverable.

    b. Northrop Grumman Electronic Systems Domain Pattern: Tamara Vallinoto give a verbal presentation on her team's having won funding for and begun development of an NGC ES Domain Pattern. She believes timing will be good for involvement in an IS2015 paper.

    c. Verification System Pattern: Andy Pickard (Rolls-Royce) was not in attendance, but indicated during IS2014 that he would like to add Review Approver Identification to this pattern; Dan Dvorak (NASA JPL) indicated that he has not been in touch with Andy on this pattern yet, since their discussion of it during the January meeting.

    d. RC Vehicle Pattern: Troy Peterson (Booz Allen) summarized his plans to construct an RC Vehicle Pattern, connected to purchasable designs (systems and components), adding autonomous systems aspects.

    e. Agile System Pattern: Rick Dove (Paradigm Shift, Int'l) summarized work he has planned with the Agile Systems WG and the Secure Systems WG, and his interest in potentially expressing his Agile System Pattern using PBSE. He will continue to consider this with Bill during his 2014 planning phase, but does not currently intend to begin until the 2015 workshops he is still planning.

    f. Secure System Pattern: Rick Dove, see immediately above.

    g. NDIA Domains Pattern: Crash Konwin was not in the June meeting to discuss this.

    h. SEMP/SEP Generation Pattern: Shams was not in the June meeting to discuss this.

    i. Restaurant Pattern: One member of the proposing team (Eric Berg) participated in this June meeting remotely, but the chair neglected to ask Eric during the meeting to discuss his continued interest in pursuing this pattern as a 2014 deliverable.

10. Bill Schindel offered to hold twice monthly web review sessions with the pattern-constructing sub-teams, in which feedback could be offered on their construction of S*Patterns:

    a. A specific construction and review schedule (twice monthly) was offered for discussion:

Sessions	Configurable S*Pattern Construction
Jul	Configurable Features Model; Domain Model
Aug	Domain Model; Interactions; States
Sep	Detail Interactions; Requirements; Attribute Couplings
Oct	Logical Architecture; Detail Interactions; Requirements
Nov	Physical Architecture; Failure Modes
Dec	More about configuration rules

    b. Rick Dove noted his experience with WGs suggested that momentum is better maintained by having weekly, instead of every other week, meetings, even if very short.

11. Bill indicated he would poll the sub-teams individually, to confirm which of them intended to participate in these review sessions in some form, and specific schedule constraints and dates.

12. A brief report was given by Bill on the MBSE Initiative's current plans and efforts to establish an INCOSE shared repository for MBSE models from the INCOSE WGs, and floating cloud-based licenses to commercial modeling tools for use in INCOSE projects.

Action Items:

13. Generate meeting minutes and distribute to attendees and interested parties. (Troy P, Bill S)

14. Update team web site with more background and references on other historical pattern efforts in systems and specific domains. (Bill S)

15. Establish sub-team project work plans and proceed against them. (All team members performing 2014 projects)

16. Contact sub-teams and firm up willingness to participate in multi-project reviews versus single-project reviews, rate of review meetings, and specific time/dates for balance of 2014. (Bill S)

17. Follow up with Rick Dove on his 2014 versus 2015 plans, related to Agile WG and Security WG and related outreach. (Bill S)

18. Start pattern review sessions with teams. (Bill S, Troy P)

19. Offer a refresher reference webinar on S*Patterns for teams. (Bill S)

20. Support IS2015 paper(s) from project teams (All team members, Bill S, Troy P)

21. Report to MBSE Initiative on Challenge Team plans and status (Bill S)

22. Continue to seek liaison with other INCOSE WGs, including Energy & Power (Katie), Agile and Security (Rick, Bill), or others.

References:

23. June 29-30 meeting slides, at
http://www.omgwiki.org/MBSE/doku.php?id=mbse:patterns:patterns_challenge_team_mtg_06.29-30-14

24. Patterns Challenge Team web site (contains all the following downloadable references):
http://www.omgwiki.org/MBSE/doku.php?id=mbse:patterns:patterns ; other references on PBSE provided there.

25. January, 2014, organizing meeting minutes and materials (see web site).

26. Patterns challenge team Charter (see web site)