INCOSE Patterns Working Group: Meeting Minutes

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Summary of Meeting: (details later below)

1. Announced formal transition of MBSE Patterns Challenge Team to MBSE Patterns Working Group, joining the ranks of other INCOSE Working Groups. We also continue to support the INCOSE/OMG MBSE Initiative.

2. Review of Patterns WG events at IW2016: Strong turn-out participation from across a number of partner INCOSE Working Group partner projects.

3. Review of Patterns WG activities that occurred subsequent to IW2016: Discussion of Patterns WG projects and other activities in progress since IW2016.

4. Discussion by members of interests and plans for Patterns WG activities planned for subsequent to IS2016.

5. Review of Patterns WG members PBSE paper presentations, activities at IS2016.

Transition to Working Group:

6. Approval by INCOSE Tech Ops of the re-chartering of the team as an INCOSE Working Group. The updated charter (reviewed in meeting) is substantially unchanged as to mission and direction, but is updated with the accomplishments of the team in its first three years. This change to Working Group should improve the visibility of the MBSE Patterns team within the INCOSE community.

7. Accordingly, a Patterns Working Group web page will be added to the INCOSE Working Group web sites on the INCOSE parent society web site.

8. Because our working group wants to continue to strongly support the ongoing INCOSE/OMG MBSE Initiative, where we started, we also expect to continue to maintain our activities in the INCOSE/OMG MBSE Initiative (led by Mark Sampson) and the INCOSE Model-Based Transformation (led by Troy Peterson). This includes continued appearance, now as a working group, in the MBSE wiki of the MBSE Initiative, and in the MBSE Workshop of the INCOSE International Workshop.

Patterns WG Events at IW2016, Jan 2016:

9. Strong engagement turn out (totaling 84 people) in three joint WG project events at IW2016 in LA:

    - Joint SoS-Patterns WG Workshop on Patterns for Systems of Systems. Included review of existing SoS WG pattern representations, and how S*Metamodel may be used to extend some of their content to include information currently outside those models, in prose.

    - Joint Agile Systems WG-Patterns WG review of ASELCM Pattern, in use in ASELCM Project, being applied across multiple project workshop study sites to represent their agility and related principles.

    - Joint PLE-Patterns WG meeting on technical review and plans for a future joint project

Patterns WG Activities that Occurred Subsequent to IW2016:

10. Participation in the (second) INCOSE Agile Health Care Systems Conference, Chicago:

    - The Patterns WG served on the Conference Planning Committee, supporting the Health Care WG

    - A Health Care Domain Model was constructed for the overall (U.S.) health care domain, as a specialization of the ASELCM Pattern System 2/3 View

    - The conference was held in Chicago on May 23-24, in Schaumberg, IL

    http://www.incose.org/ChaptersGroups/WorkingGroups/Application/healthcare/agile-healthcare-conference-(2016)

11. INCOSE Agile SE Life Cycle Management (ASELCM) Pattern Discovery Project: Update of site-specific report papers for the Northrop Grumman and Lockheed-Martin ASELCM Workshop studies, for presentation at IS2016.

12. Participation in the (tenth) INCOSE Great Lakes Regional Conference (GLRC) 2016 Planning Team work:

    - Patterns WG served on Conference Planning Committee, supporting plans for the program, including the first year to offer live distributed broadcast to four satellite during Professional Development Day

    - To include a Pattern Based Systems Engineering (PBSE) overview session and tutorial session

    - Planned to occur in September, 2016

13. Patterns WG Meeting of July 5, 2016:

    - Frank Salvatore, Decision Analysis WG chair, discussed interest potential future joint project related to use of patterns to support decisions. There was a short discussion of how S*Patterns support improved decision making. John Fitch expressed strong interest in participating in this project.

    - Matthew Hause discussed enterprise and disaster management pattern interests and opportunities. (This later resulted in contribution to the Energy Tech 2016 conference track on critical infrastructure and MBSE, in November)

    - Discussion of historical S*Patterns constructed for systems other than products—manufacturing systems, service and support systems, development systems, etc. Charles Krueger, co-chair of the PLE WG, encouraged inclusion of such an example in the joint project being set up with the PLE WG.

    - There was a discussion of Interface Patterns, or Interfaces in other Patterns. Frank Salvatore reminded the team of a long-standing interest on his part in this area. Rebecca Deschamp discussed current work with test and interface patterns, and possibilities of related joint activity. (NASA Wallops sounding rockets as legacy example.) She described this as part of the larger NASA MBSE Pathfinder Project, led by Dr. Karen Weiland, who has interacted with this team before, and at GLRC 2015 in Cleveland.

    - Mac Lunn discussed interest in enhancing the future quality of INCOSE produced web conferencing. This is being piloted at the INCOSE Great Lakes Regional Conference in September, 2016.

14. Action items planned for but still pending during the period between IW2016 and IS2016:

    - Collecting example Legacy System reference information from PLE WG sources, for the joint Patterns WG-PLE WG project on legacy system product line pattern harvest by the Method of Projections

    - Engagement with SoS WG on additions of S*Features or other S*Metaclasses to existing SoS Patterns

Discussion of Interests in Future Patterns WG Activities with Other WGs, Planned to Follow IS2016:

15. Product Line Engineering (PLE) Working Group chair Guillermo Chale-Gongora attended and explained interest in joint project with Patterns WG, per discussion at IW2016. He indicate that he would identify and supply example legacy system reference data, which we would use in the project proposed by the Patterns WG, to demonstrate harvest of a PBSE-based PLE pattern from legacy data, using Method of Projections discussed by Patterns WG at IW2016.

16. Agile Systems WG chair Rick Dove, with members Phyllis Marbach and David Lempia, attended and explained current activity in the INCOSE Agile Systems Engineering Life Cycle Management (ASELCM) Pattern Discovery Project, which our WG has been supporting. There will be three more papers, jointly authored, to be presented on three additional workshop sites illustrating agile systems practices and principles.

17. Tool Interoperability and Model Life Management (TIMLM) WG co-chair Lonnie VanZandt, along with members Saulius Pavalkis and Barry Papke were in attendance, and discussed plans for a joint WG project illustrating the vision of a future environment / ecology, supported by automation, for collaborative engineering, with the Patterns WG providing illustrative content data.

18. Richard Payne, from the Systems of Systems (SoS) WG, was in attendance, and discussed plans for a joint project with the Patterns WG, in which the SoS WG library of SoS Patterns will be updated with illustrative S*Metaclasses to add S*Feature, S*Interface, S*Interaction, and other S*Metamodel content to bring (currently prose) descriptions of properties of those patterns inside the models of the patterns. Bill Schindel also attended the SoS WG meeting at this IS2016 conference.

19. INCOSE's sister society, the International Society for the System Sciences (ISSS), will hold its annual international meeting in Boulder, CO, USA, just after the current INCOSE IS2016 meeting. Through arrangements with the INCOSE System Sciences Working Group chair James Martin and member David Rousseau, the Patterns Working Group will provide a plenary panel contribution presented by Bill Schindel on the S*Metamodel and related emergent patterns as a basis for systems science.

20. Bill met with Decision Management WG during the IS2016 meeting, discussed possible future joint interests.

Patterns WG Member PBSE Paper Presentations, Activities at IS2016:

21. MBSE Patterns related papers being presented by members at IS2016:

- B. Schindel and R. Dove, "Introduction to the Agile Systems Engineering Life Cycle MBSE Pattern"
- R. Dove, C. Scrapper, B. Schindel, "Agile Systems Engineering Process Features Collective Culture, Consciousness, and Conscience at SSC Pacific Unmanned Systems Group"
- B. Schindel, "Got Phenomena? Science-Based Disciplines for Emerging Systems Challenges"
- T. Peterson, B. Schindel, "Explicating System Value through First Principles: Re-uniting Decision Analysis with Systems Engineering"
- D. Lempia, B. Schindel, T. Hrabik, S. McGill, M. Graber, "Using Visual Diagrams and Patterns for Consistent and Complete Requirements"

Action Items:

22. SoS WG and Patterns WG parties follow up together and create examples adding more S*Metamodel components to repository of SoS Patterns (Payne, Dahmann, Fitzgerald, Ingram, Schindel)

23. PLE WG and Patterns WG parties follow up together and agree on specific target example legacy system, including data source, for public joint illustration of S*Pattern extraction, then meet at IS2016. (Chale-Gongora, Krueger, Schindel)

24. Agile WG and Patterns WG parties follow up together on remaining illustration sites, reports or papers, and targeted aspects of ASELCM Pattern for attention in future additions (Dove, Schindel)

25. Create new Patterns WG Web Page within the INCOSE WG web pages, linked to existing OMG/INCOSE mbse wiki pages site for our WG (Peterson, Schindel)

Reference Materials:

26. General web site for Patterns WG: http://www.omgwiki.org/MBSE/doku.php?id=mbse:patterns:patterns