

Interface Patterns Project <u>Meeting Minutes</u>

Date/Time: Friday, May 5, 9:00 - 11:00 AM EST

Attendees:

| Х | Bill Schindel | ICTT System Sciences | schindel@ictt.com | 812.232.2062 |
|---|-----------------|----------------------|----------------------------------|--------------|
| | Frank Salvatore | Engility Corp. | frank.salvatore@engilitycorp.com | 973.607.2068 |
| х | Jon Torok | NSWC Crane | torokrj@gmail.com | 812.854.5247 |
| х | Jason Sherey | ICTT System Sciences | sherey@ictt.com | 812.232.5968 |
| Р | Stephen Lewis | ICTT System Sciences | lewis@ictt.com | 812.231.7930 |

Summary:

- Continued discussion led us to the conclusion that the primary technical issues we are engaging turn out to <u>not</u> be about the neutral underlying S*Metamodel, but rather about various ways we might map it to SysML (or even Magic Draw specifics of SysML). (See also subsequent May discussion of related formal metamodel grammatical details.)
- 2. We discussed the "larger entity" question that Jon had raised earlier (combining S*Interfaces, S*SOA, etc.) and the sequence of related views published in the May 5 minutes. There was recognition that a series of larger SOAs can be viewed, and may even need to be, for some types of interfaces, but still in the structure of the related S*Interface constructs.
- 3. Referencing the list of work streams we had previously generated together, we agreed on a subset of priority tasks within them, for earliest next actions.
- 4. We discussed only briefly the summary table of candidate interfaces that Bill distributed before the meeting.
- 5. We agreed on action items, and the next meeting will be on Friday, June 2, 9:00 AM EST.

Details:

- 6. For details on the discussion of "larger SOAs", see the diagram sequence in the May 5 meeting minutes. This again led us back to discussing process, in the sense of different views being suitable at different points in the design and life cycle. We continue to see that mapping the model views to tasks or points in the design process and life cycle is an integral part of this project.
- 7. In looking over the ISO15288 process framework as a way to list and refer to different points in the process and life cycle, Jason pointed out that we might also look at ISO15289, which is about the information transferred between the different ISO15288 processes.
- 8. We looked over the project work stream list (see Figure 1 below) and agreed it still seemed to be the right set of overall tasks; however, we agreed that the following subset currently has the highest priority:
 - Work streams 1, 3, 4, and 6

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Figure 1: Current Priority Work Streams are 1, 3, 4, and 6

- 9. Jon is depending on ICTT to provide an update to his S*Profile, and we agreed that is ICTT's role in the project to do so.
- 10. One of Jon's questions about the profile concerns the related Mapping Document table of detailed mappings, in which "NA" appears in the right-most column. There are questions of how to interpret these—do they mean "does not apply" or do they mean "not available" or do they mean something else? ICTT to clarify and update as needed.
- 11. We discussed what might be called "model specialization wizards", as follows:
 - The native (unenhanced) SysML tools provide either very little or only limited help in the
 population of a model by a modeler who would like for the active profile(s) to have
 more direct and easy/natural impact on what classes and relationships apply. EA (MDG
 Technology) provides a bit more than Magic Draw, but is also limited. In other SysML
 tools, we have also seen extensive user enhancements added to profiles in the form of
 "right click helpers" that make better use of the profile information.
 - Bill pointed out that, even if the above shortcoming was completely solved by a smarter native SysML tool's use of its profile(s), we would still need substantially the same thing (wizard) in the case of creating a more specialized model from a pattern, and there is typically a whole class hierarchy of patterns. ICTT has already build S*Configuration Agents that are related to this, and we probably need something in Wizard form to cover both (a) and (b).



• In Systematica, we call this progression of checks "Gestalt Rules", because they are checks (or construction aids) on the overall systematic "shape" of the model, not just individual classes or relationships. See Figure 2 below.





Figure 2: Gestalt Rules in Systematica holistically relate S*Patterns to their specializations



- 12. Briefly discussed that both Jon and Bill will be at the No Magic MBSE Symposium next week in Texas, where we should try to get more insight about Teamwork Server versus Teamwork Cloud.
- 13. Plans for next activities:
 - a. Next meeting: Friday, June 2, 9:00 AM EST
 - b. Actions before next meeting: See Action Items

Action Items:

Work Streams 3, 4:

14. Identify list of views, queries, reports, or displays (e.g., ICD, levels/scope of Interfaces, etc.) that we should pursue as interface-related, against related ISO 15288/15289 or other frameworks. (Frank, Jason, Jon)

Work Stream 1:

- 15. Resolve meaning of the "NA's" in S*Metamodel Mapping Document detail table for Magic Draw, and what action is required, if any. (Stephen, Jason)
- 16. Identify list of remaining mapping issues for mapping to SysML/Magic Draw, in the Interface area of S*Metamodel. (Jon, Jason)

Work Stream 6:

17. Update profile provided to Jon, accordingly (Stephen, Jason)

Other:

- 18. Send out repeating meeting calendar invitation (Bill)
- 19. Post minutes and materials to project web site (Bill)

<u>Reference Materials:</u> (These may be down loaded from the following project web site)

- 20. Project web site: http://www.omgwiki.org/MBSE/doku.php?id=mbse:patterns:interface_patterns_team
 - Pages easily added under that location. Files can be inserted there when appropriate (see same)
- 21. Agenda, 05.19.2017 meeting of Interface Patterns Team
- 22. Interface Patterns Project Charter, INCOSE Patterns Working Group, V1.3.2
- 23. Abbreviated S*Metamodel Glossary, V4.3.1, ICTT System Sciences, 2017.
- 24. Extract from S*Metamodel: Interface Related Elements, 03.07.2017, V1.2.6, ICTT
- 25. Torok, J., Sherey, J., "Interface model content emails Feb-Mar 2017".
- 26. Shames, Sarrel, Friedenthal, "A Representative Application of a Layered Interface Modeling Pattern", Proc. of INCOSE International Symposium 2016, Edinburgh, UK; paper + slides: http://www.omgsysml.org/A modeling pattern for layered system interfaces-INCOSE%20IS15_paper-sarrel-shames.pdf

http://www.omgwiki.org/OMGSysML/lib/exe/fetch.php?media=sysml-roadmap:a_representative_application_of_a_layered_interface_modeling_2016-07-11.pptx

- 27. Shames, Sarrel, Friedenthal, "Modeling Systems of Systems Interfaces with SysML", AIAA 2016 Conference, SpaceOps Conference, (AIAA 2016-2500) http://dx.doi.org/10.2514/6.2016-2500
- 28. OMG SysML 2.0 Interface Concepts Team web site:

http://www.omgwiki.org/OMGSysML/doku.php?id=sysml-roadmap:interface concepts modeling core team

- 29. JPL MBEE Project wiki: https://github.com/Open-MBEE/ProjectWiki
- Schindel, Extract from Requirements for Models Project, INCOSE Patterns Working Group and ASME, INCOSE MB Transformation, and VV50 Model Life Cycle Working Group, INCOSE Patterns, 2017.