2021 Annual INCOSE international workshop
Virtual Event
January 29 - 31, 2021

Tools Integration & Model Lifecycle Management

www.incose.org/IW2021

CHAIR

John Nallon (Self Employed)

CO-CHAIRS

Mark Williams (Boeing)
Robert Malone (Boeing)

INCOSE WEB PAGE

https://connect.incose.org/WorkingGroups/TIMLM/Pages/Home.aspx

INCOSE CONNECT ADDRESS

http://www.incose.org/ChaptersGroups/WorkingGroups/transformational/tools-integration-interoperability

Charter Summary

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WG PURPOSE/MISSION

The Tool Integration and Model Lifecyle Management WG provides a forum for discussion and dissemination of best practices, methods and processes that promote the development, validation and deployment of standards to advance the exchange of digital data between MBSE tools and toolsets.

WG GOAL(S)

- To provide the systems engineering community a reliable source of information about tool data exchange standards used while executing their business processes in the product lifecycle.

- To collaborate with data exchange standards organizations and other supporting INCOSE Working Groups to characterize systems engineering tool integration and interoperability requirements for tools and data standards for the exchange of Model Based Systems Engineering (MBSE) digital artifacts.

- To promote the development, validation and deployment of standards that advance the interoperability, storage, archival and retrieval of digital data and artifacts produced by systems engineering processes.

- To provide a forum for the discussion and dissemination of information regarding tool integration, data exchange processes, use cases applying standards and the data exchange accomplishments of in our engineering community.

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WG SCOPE

The TIMLM WG is focused on the integration and interoperability of tools, data, models and processes as they relate to Systems Engineering processes and methods throughout the acquisition and product development life cycles. The TIMLM maintains collaboration with PDES Inc., ISO and STEP standards committees and INCOSE Working Groups as required to improve the exchange, archival and retrieval of digital artifacts produced by our systems engineering processes.

OUTCOMES (PRODUCTS/SERVICES)

1. Details of all applicable deliverables shall be defined in separate Technical Project Plans (TPP?s). TPP?s will be developed, submitted and tracked as defined by the applicable Technical Operations procedure for each working group project.

2. The TIMLMWG provides information services for other Working Groups to consider in developing their own agendas and plans that involve the use of computer-based tools in the execution of their plans. Frequent requests from the SE Tools Database WG, external standards committees, and the MBSE activity groups are supported as required.

3. The TIMLMWG provides services (as needed) to the Standards Initiative for developing international standards that involve the integration and interoperability of systems engineering tools. The TIMLM WG communicates with numerous vendors, standards groups and professional organizations interested in or working on integration and interoperability requested by INCOSE.

IW Outcomes

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IW OUTCOMES

1. Conducted an in depth review of the numerous MBSE data standards being developed by a wide range of consortia. We discussed the functions and capabilities of the different standards, their origins, their futures, their integration and the roles of the different standards bodies. The four categories of data standards were discussed (data and interoperability, process, procedural and design) and what the relationships are between the standards. At the end of the discussion an MBSE Standards quiz was given to test user knowledge of the standards and their related organizations. (Mark Williams, Adrian Murton, John Nallon)
2. ISO-IECJTC1-SC7_N8226_ISOIEC_CD_24641: Methods and Tools for Model Based Systems and Software Engineering review and editing of the second draft for submission to the ISO committee. (Robert Malone)
3. Introduction to and discussion of the Aerospace Corporation Model Portfolio Management guideline and potential adaption by INCOSE as a product. (Albert Hoheb, Misak Zetilyan, John Nallon)
4. ?Delivered and overview of the ISO 24641 Standard to the MBSE Initiative. (Robert Malone)

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PLANNED ACTIVITIES AFTER IW

Continue weekly working meetings with PDES Inc. MBSE WG and the LOTAR MBSE for LOTAR Working Group to continue the transformation of data exchange standards from a document paradigm to a model based paradigm.

Continue support of the ISO-IECJTC1-SC7_N8226_ISOIEC_CD_24641 committee draft reviews and development of the standard. Provide standard reviews as requested by ISO and the INCOSE Standards Group.

Discuss further the potential to incorporate the Aerospace Model Portfolio Management Guide as an INCOSE Work Product.

Establish a collaboration with the NAFEMS-SMS Working Group regarding standards, terms, definitions and meta data.

PLANNED WORK PRODUCTS AFTER IW

Collaboration with PDES Inc, LOTAR, and ISO on data exchange standards related to MBSE to proposals to transition data standards to MBSE.

Complete a TPP for a Model Portfolio Management Guide and submit for approval.

Continue to communicate and educate the INCOSE community using Forums, workshops and symposia to expand the knowledge of the MBSE data exchange standards