

Summary of the LOTAR International Workshop

June 24th to 26th, 2014 – Airbus, Toulouse, France

There were approximately 17 on-site participants plus an additional 10 participants via teleconference. There was a parallel meeting with the CAx Implementor Forum.

Project Management

- Consolidation of the 2014 LOTAR International budget plan with the planned contracts to service providers.
- Preparation of the draft 2015 LOTAR project and budget plans, with the provisional list of Aerospace and defense members.
- Summary of CCSDS recent works. PAIS (“Producer-Archive Information Specification”) CCSDS standard published, waiting for ISO review and publication, tutorial planned for beginning of 2015. Start of the preservation process standard. “Requirements for bodies providing audit and certification of candidate trustworthy digital repositories”: CCSDS 652.1-M-1.1 Magenta book published in March 2014. Other future projects to be discussed according to needs (functional architecture ...)
- LT Archiving of Product model information versus digital document: start of discussions regarding the complementary nature of the 2 approaches, and their needs for consistency. This is related to the US work on the exchange of a TDP (“Technical Data Packages” – Mil Std. 31000 rev. A).
- Status of preparation of STEP AP 239 ED3 white paper: summary of the ongoing actions, mainly led by the ASD SSG, (objectives, types of changes, milestones, approaches, challenges, etc.). Setting up of a close coordination with the AIA – ASD ILS Data Exchange and Modelling WG.
- Status of STEP AP 242 ED1 and AP 242 ED2 project. Planned publication of AP 242 edition 1 in S2 2014. Two communications about the STEP AP 242 standard and the status of COTS applications (26 March: Paris, 12 May: Berlin). Status of ISO ballot of STEP AP 242 ED2 New Work Item proposal; preparation of AP 242 ED2 kick off workshop in Charleston, the week of Sept 22nd after the LOTAR workshop.
- Consistency of standards for “3D PMI semantic representation”: identification of potential overlaps of international standards for 3D PMI representation (design, manufacturing, metrology, visualization, etc.). Discussions on the proposal of LOTAR recommendations to ISO /TC 184 /SC 4, to be approved during the LOTAR Sept. 2014 workshop (regarding ISO 14739 PRC ED2, AMF, QIF V2, ISO 14306 JT ED2 CD)
- Follow up of LOTAR standards consistency overview. Important actions of governance to be monitored in most of the disciplines covered by the LOTAR project (3D PMI, PDM, electrical, 3D visualization, etc.)
- Status of preparation of new WG for LT Archiving of “Simulation and Analysis Information” (New Work Item for P6XX family). Presentation of the work of the preparatory WG: business needs, specificities of simulation and analysis information, preparation of a workshop in Sept. 2014 to finalize the P6XX NWI.
- Summary of the 19 – 20 June 2014 ISO /TC 184 / SC 4 workshop for “STEP Future architecture”: next workshop planned in Sept. 2014 to propose recommendations for STEP AP 242 ED2 and AP 239 ED3.
- Next LOTAR workshop: 15th – 17th of Sept. 2014, in Charleston, USA, hosted by PDES Inc.

“CAD 3D PMI” Workgroup (Part Family 1xx (110, 120, 121, 125))

- Completed update on PMI WG Website for content and utilize new agreed upon template for LOTAR WGs.
- Part 110 E2 (3D geometry) and part 120 E2 (3D geometry with PMI) initial draft editing was accomplished though work continues. Target completion for these drafts is December 2014. It was noted that verification standards for 3D tessellated geometry need to be identified and/or documented in Part 110E2.

- Continued work on Part 125 (Assembly with PMI) document editing.
- Held a detailed discussion on the consistency of various standards relative to 3D PMI semantic representation. Agreed there is a need to understand the current direction of the various domain standards and provide a LOTAR recommendation accordingly (Planned for Sept 2014 workshop).
- Updated the plan for Proof of Concept pilots for the remainder of 2014 and potential activity for 2015.

“PDM” Workgroup (Part Family 2xx)

- Status of the budget & planning. European budget will be used to launch a pilot for “LTA of As design product structure in STEP AP239 edition 1”.
- Review of Part 210 edition 1: most of the actions are resolved, so final draft could be delivered but will not be published. Edition 2 which is more relevant will be published.
- Discussion about the model based versus document based approach, concluded with the review of the existing LOTAR part EN 9300-003: 5.3.1 "Archiving Product Models vs. Archiving Documents".
- Preparation of an LTA functional system architecture overview picture to be used for the Functional Architecture document (Part EN9300-006) or Preservation Planning document (Part EN9300-020).
- Meta data for archive package: Discussion on package content after OAIS magenta book review and description of creation package process in two approaches.

“Composites” Workgroup (Part Family 3xx): to be review with Rich

- Status of resolution of Boeing patent issue for composite 3D tessellation representation. Ongoing discussions between Boeing and ISO /TC 184 /SC 4 according to ISO rules (prerequisite for the publication of AP242 ed1). Still not solved with Dassault Systèmes lawyers; could postpone DS prototype presentation planned in Sept. 2014.
- Status of development of STEP AP 242 recommended practices for composite design. New recommended practices for AP 242 composite BO Model XML on going: first draft planned for beginning of July 2014. Update of recommended practices for AP242 ed1 AIM to be finalized: planned for Sept. 2014.
- Composite implementation tests planned for next CAX-IF test round: test cases description on going, to be tested by Dassault Systems and Core Technology

“Electrical Harness” Workgroup (Part Family 4xx)

- Continuation of the enhancement of the draft document describing the list of essential information to be preserved for physical electrical harness definition for design and construction.
- Review of the draft overview of the entities – relationship diagram: new version to be instantiated on test cases.
- Discussion on other use cases as exchange of electrical harness design data with simulation tools.
- Confirmation of support to the STEP AP 242 ED2 project for extension to electrical harness.
- Preparation of the next actions for Q3 2014: LOTAR Sept. workshop and AP242 ED2 Sept. workshop.

“3D Visualization” Workgroup

- There was no specific session for the 3D visualization working group. The requirement document (including the use cases description) is available for review.
- The next steps will be: - the validation of LOTAR 3D Visualization Requirements document, - the creation of the list of criteria for the compliance matrix.