

Summary of the LOTAR International Workshop

March 11 to 13, 2013 – Gaithersburg, Maryland

There were approximately 50 on-site participants plus an additional 10 persons via WebEx and teleconference. There was also a parallel meeting with the CAx Implementor Forum.

Project management

- Discussion about the need to run a PDM Implementor Forum (PDM-IF) which allows to test and verify the Recommended Practices prior to the publication of LOTAR part 210. Agreement of the LOTAR project to contribute to the white paper for the PDM-IF.
- EADS will organize the preparation of the PDM-IF White Paper. The target date for the White Paper completion is mid-November; for a confirmation of support by sponsoring associations for mid of December 2013.
- Discussion about the way of working between the PLCS-IF and the future PDM-IF. Example of topics to be reviewed: harmonized information model for the common scope, common infrastructure, and common methods for Recommended Practices. The involved vendors are likely to be the same for both Implementor Forums
- Preparation of the finalization of the PDM harmonization of AP239 PLCS PSM and AP242 BO model (Phase 3 batch 2). Agreement of the scope; results will be brought into STEP AP242 as DIS ballot comments.
- Preparation of a conference call to identify the level of coordination between the LOTAR project and the AIA – ASD ILS Suite project. The main coordination is anticipated to be with the LOTAR PDM WG.
- Proposal for new Edition of Part 110: addition of tessellated geometry and independent surfaces/curves including Val Props based on new requirements (Composites, Electric Harness). Target to send the related NWI by end of May 2013. NWI should also collect further requirements, to be submitted until end of April.
- The PDM team identifies the need for the LOTAR Part “Functional Architecture” (e.g. to deal with reference between Archive Information Packages). Need to ensure the setting up of a “Functional Architecture” WG.
- Review of the status of consistency of the LOTAR standards with the other standardization projects: distinction between the NC machining manufacturing standards (STEP-NC, AP 238) and the Measurement standards. Inclusion of the ISO 8000 standard for “data quality”. Review of the ASD SSG web page of the “PLM interoperability” WG.
- Update the LOTAR website: 3D Visualization WG updated; Meta-data for archive package WG added; new presentations added in the “communication” page.
- Confirmed the list of Aerospace & Defence members for 2013; and reviewed dates for 2013 LOTAR workshops
- Next LOTAR workshop: 11th – 13th of June 2013, in Toulouse, France, hosted by Airbus CIMPA.

For each working group: a presentation of the week’s activities and of the 3 month look ahead.

WG “LOTAR of Mechanical/CAD 3D PMI” (Part 120, Part 125):

- EN9300-120e1 waiting to be synchronized with NAS9300-120e1 version by the end of May.
- Working with the CAD solution providers to see what PMI entities they support. The LOTAR project will send out a survey to the user community to determine the priority of implementation of PMI.
- Completion of the LOTAR definition for CAD 3D Semantic PMI.

- Discussion about Quality Information Framework (QIF) and quality throughout the manufacturing process.
- Status of progress of ISO PDF and PRC; discussion of collaboration between LOTAR and ISO TC 171.
- Presentation of planned enhancements in ASME and ISO in the next years
- Presentation of the status of development over the last 3 months by the Solution Providers.
- Start of discussion to involve the CAM solutions based on 3D NC machining form features.

WG “LOTAR of PDM information” (Part 2XX)

- Continuation of the preparation of the part 210 edition 2 “as designed product structure with configuration management”; will include the mechanism of options / specifications managements.
- Discussion on postponed items, specifically on embedded software. Archival will be focused (later) on meta-data for configuration management of software especially things like mission system software that may be directly related to a specific version of a piece of hardware.
- Question about appropriate repository for DEX efforts (for example, LOTAR RDF libraries) relative to LOTAR needs to be answered. Preference to use a common repository (e.g. Sourceforge)
- Publication mechanism is another item of interest (OASIS PLCS TC)

WG “LOTAR of Composite design” (Part 3XX)

- Patent drafts out in March to PDES and DS. ISO and Siemens will be next to receive them.
- Discussion on Siemens PLM Vistagy’s activity on composite STEP work. Need to encourage continued participation in the activity. The objective is to set up CAD Composite interoperability testing between Dassault Systèmes and Siemens PLM solutions in the CAx-IF.
- Wichita State University presented their project report overview. Work done with Catia V5R22, Catia V6R2013, FiberSim 2012 (w/V5R22).
- FiberSim will to update their STEP translator to support changes in V5R22 and in order to be compliant with the STEP Composite Recommended Practices.
- Still need to address the handling of the material libraries.
- Next activity should focus on less generic scenarios and more on certain capabilities. Discussions about the planning of implementation by CAD vendors of the STEP Composite validation properties.

WG “LOTAR of Electrical Wiring Harness” (Part 4XX)

- Workshop focused on the use case for LTA&R of physical electrical harness for design & construction.
- Enhancement of the presentation of the different design methods of A&D industries to be considered.
- Progress in the definition of test cases per methods, and in the identification of the essential information.
- Review of ASD SSG new web page of the “electrical harness interoperability” WG, based on 4 principles: availability of: - use cases, - ISO information model, - recommended practices, - CAD vendors testing.
- Preparation of the statement of works for a presentation of the VDA VEC specification.
- Preparation of the 5 years deliverables roadmap of LOTAR electrical harness WG. This roadmap has to be consistent with the STEP AP 242e2 roadmap. Need to prepare the LOTAR Electrical use cases for the Sept. 2013 workshop for the white paper for “STEP AP 242e2”.

WG “LOTAR of 3D Visualization” (Recommendations):

- Focus on the use case “L-T Archiving and Retrieval of the derived visualization data for certification”.
- Description of the requirements for Validation Properties for the “Ingestion” and “Retrieval” Processes.
- Discussion of the verification and validation rules of 3D tessellated geometry, colours and texture.
- Descriptions of the requirements for the standards 3D visualization data formats. ISO standards to be studied: PDF ISO 32000, PRC 1.0 JISO 14739 July 2013, U3D ISO PAS in-work to become a ISO Standard, JT ISO 14306 ED1 and 2, STEP ISO 10303-242.

WG “LOTAR of Meta-Data for Archive Packages”

- Work on Metadata requirement. Description of the metadata to be considered with the LOTAR “PDM” WG
- Evaluation of the metadata DEX from Reference Implementation (RI) of PDM WG
- Population of the DEX; results analysis.
- Review of the linkages between AIP documents, via the external references mechanism.