

Summary of the LOTAR International Workshop

December 10th to 12th, 2014 – PROSTEP, Darmstadt, Germany

There were 19 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

- Consolidation of the 2015 LOTAR International project plan and budget plan, and formal approval by the present LOTAR members.
- Publication on the 1st of Dec. 2014 of ISO 10303 AP 242 E1 “Managed model-based 3D engineering” ([LINK](#)), and of AP 209 E2 “Multi-Disciplinary Analysis and Design” ([LINK](#))
- STEP AP 242 ED2 project: start of weekly conference calls of the different teams; main effort for the extension to electrical harness. 2 workshops end of Sept., and beg. of December 2014.
- Status of preparation of STEP AP 239 ED3 white paper: summary of the ongoing actions. Setting up of a close coordination with the AIA – ASD ILS Data Exchange and Modelling (DME) WG. Planned start of biweekly teleconferences in Febr. 2015 to prepare an international workshop and finalise the white paper.
- 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.)
- Successful LOTAR ballot for the creation of a new WG for LT Archiving of “Engineering Analysis and Simulation information”. Weekly conference calls organized.
- Preparation of the 2014 LOTAR annual report, to be published in the LOTAR web site.
- Next LOTAR workshop: 2nd – 4th of March. 2015, in Gaithersburg, USA, hosted by PDES Inc.

WG “LOTAR of Mechanical/CAD 3D PMI” (Part 1XX)

- Part 110e2 “CAD mechanical 3D explicit geometry information” was completed (extension to 3D independent curve and surface, and 3D tessellated geometry) and is ready for ballot in Jan. 2015.
- Part 120e2 and Part 125e1 were developed through section 9 and are both on track to be complete by end of Q2 2015, and then to be sent for ballot.
- Many updates were made to the LOTAR “CAD 3D and PMI” WG Webpage.
- Coordination between the LOTAR project and - the Digital Manufacturing and Design Innovation Institute (DMDII), - the Consultative Committee for Space Data Systems (CCSDS), - and the Quality Information Framework (QIF) are a priority for Q1 2015. It is critical to understand and leverage working relationship between LOTAR and these entities.
- Discussion on Membership commitments for 2015
- Presentation of vendor status reports by: DataKit, ITI, Siemens, Theorem, Dassault Systemes, and PTC.

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

- Launch of European pilot for “LTA of As design product structure in STEP AP239 edition 1” including SIP descriptive information file.
- Mapping of LOTAR basic requirements from part 002 against the functions derived from OASIS process model
- Review of Part 210 edition 1: Jotne EPM proposal to rework the Part 210 using STEP AP239 ed1 to be aligned with ASD specification to reduce risk linked to the usage of OASIS PLCS PSM data model. Start of analysis table for a full PDM group discussion.
- Meta data for archive package: No discussion on this topic.

WG “LOTAR of Advanced Manufacturing and Composite Design” (Part 3XX)

- Resolution of the issue of the Boeing patent for Composite 3D tessellated plies; patents signed by Dassault Systèmes (December 2014), allowing to start to develop STEP AP 242 interface for 3D composite plies. Patent discussions accelerated with Siemens PLM Solutions for NX FiberSim.
- Potential workshop required
- Contract to Wichita State University (WSU) for continued evaluations of STEP AP 242 composite interfaces
- Meeting at WSU December 2014
- Work on P300 “Fundamentals and concepts for LT Archiving of Composite information” continuing; target draft at 1st Quarter 2015 Gaithersburg meeting
- Work on Part 310 “LT archiving and retrieval of composite design” document started.
- Draft Activity diagram for AP242e2 composites

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

- Joint workshop with STEP AP 242 ED2 “electrical harness” WG for preparation of the electrical harness information model. Review of the draft activity diagram. Review of the description and illustrations of specific electrical objects (multi wires, net list, splice, coaxial and triaxial cable, segment, etc.)
- Discussions on the definitions for electrical harness information model to be used (e.g. IEC Electropedia)
- Continuation of the enhancement of the document describing the list of essential information to be preserved for physical electrical harness definition for design and construction.
- Preparation of the next actions for Q1 2015: organization of confcals with 4 electrical software vendors

WG “LOTAR of 3D Visualization” (Recommendations)

- No “3D visualization” WG session was planned during this workshop.
- The Q4 2014 achievements are the publication of a first version of the LOTAR requirements for long term archiving and retrieval of visualization data and the compliance matrix template.
- The Q1 2015 activities will be the internal review of ISO 14306 “JT” Ed1, ISO 14739 “PRC” Ed 1 and ISO 10303-242 “AP242” Ed1 standards according to the LOTAR [“compliance matrix for 3D visualization data”](#)

WG “LOTAR of Engineering Analysis and Simulation information” (Part 6XX):

- LOTAR EA&S overall domain was reviewed and refined and initial focus (Phase 1) was defined.
- Review and completion of the overall planning of the WG for the next 3 years.
- Definition of the strategy for initial communication with CAE vendors.
- Definition of initial use cases for Phase 1, for LT archiving and retrieval of structural analysis models.
- Preparation of LOTAR EA&S webpage; planned publication in Q1 2015.
- Definition of way forward for collaboration with NAFEMS Simulation Data Management WG.