

Summary of the LOTAR International Workshop

June 21st to 23rd, 2016 – Toulouse, France

15 on-site participants plus an additional 5 persons via teleconference. Parallel meeting with the CAx Implementor Forum.

Project Management

- Consolidation of 2016 LOTAR International budget plan with the planned contracts to service providers.
- Preparation of the draft 2017 LOTAR project and budget plans, with provisional list of Aerospace and defense members.
- Status of [STEP AP239 Ed3 project](#): Summary of the kick-off meeting held on 15 – 17 June (Toulouse). Review of project objectives, deliverables, project breakdown structure and associated project cost. Preparation of setting up of the project steering committee. Identification of short term actions. Preparation of a MoU for the development of AP239 e3 between AIA-ASD ILS Council, ISO /TC 184/SC 4, and OASIS PLCS. Preparation of a meeting supervised by ISO /TC 184 /SC 4 /WG 12 to define the STEP Core Technical Capabilities common to AP239 ed3 and AP242 ed2, supporting the AIA – ASD ILS Specs.: target date to be confirmed: 23rd – 25th of Aug. 2016, in Europe.
- Status of [PDM Implementer Forum](#): Successful project with good involvement of integrators and PDM vendors: start tests of AP242 XML interfaces of 4 PDM systems: Windchill V11, 3DEXPERIENCE, Team center, ARAS. 1st test round closed in April, preparation of the 2nd test round, with results in Sept. Publication of the new version of AP242 XML recommended practices for assembly structure in May. PDM-IF “User Group” meeting held in June, for review of new use cases, and preparation of 2017 project plan.
- Summary of [STEP AP 242 ed2 project](#): Presentation of the overview of the “Committee Draft” HTML documentation, to be sent to ISO in July 2016 for launch of the CD ballot. Important effort to implement the principles of the “new STEP architecture”, using SysML modelling language. Progress in the setting up of the coordination with AP239 e3 project for the finalization of PDM harmonization for the STEP “core information model”. Preparation of the document “additive manufacturing part and build information”, presented during the ISO /TC 184 /SC 4 meeting in Sapporo.
- [Launch of the enhancements of 2 STEP standards of interest for A&D](#): AP238 e2 “Model based integrated manufacturing”, to support 3D NC machining and link with 3D inspection; AP209 e3 “Multi-disciplinary analysis and design”, to be extended to structural testing and correlation between analysis and testing.
- [Follow up of LOTAR standards consistency overview](#). Availability of Venn diagram for each LOTAR WG, allowing to identify the main interdependencies and to manage the associated coordination actions.
- [Preparation of a NWI for LTA of MBSE information](#). Identification of American and European coordinators in charge to prepare the New Work Item for this new family of LOTAR parts. Proposal of first priorities focused on LTA&R of “requirement management information” (part 510?) and “Validation and verification information” (part 520?). Preparation of the NWI for presentation during the LOTAR Sept. 2016 meeting.
- [Next LOTAR workshop: September 12-15, 2016, St. Simons Island \(GA\), USA, hosted by PDES, Inc.](#)

WG “LOTAR of CAD mechanical and PMI” (Parts 1XX):

- Part 110 E2 “3D shape” (based on exact and tessellated geometry): ready for publication.
- Part 120 E2 “PMI tessellated graphic presentation”: ready for initial ballot.
- Part 121 “PMI representation”: TB finalized with planned internal ballot in Q3 2016 and external ballot in Q4 2016.
- Part 125 “Assembly with PMI graphic presentation”: same planning than part 121.

- Update of the 5 years roadmap, with a new part 122 for “LTA&R of machining form features”, and a new part 13X for “LTA&R quality inspection”.
- Review of the Venn diagram for the “mechanical” WG.

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

- No meeting; waiting for the results of the PDM harmonization between AP242 E2 and AP239 E3.

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

- No meeting; weekly conference calls of the team held regularly.
- Works on the LOTAR part 300: target to send for ballot part 300 and 310 end of 2017.
- Preparation of an update of the AP242 e1 recommended practice for composite design based on the AIM, planned to be available for Sept. 2016.
- Boeing composite patent agreement signed by Siemens PLM in Q2 2016, but still no confirmation of participation in the CAx-IF “Composite” WG. Opportunity to find a third party integration vendor to develop Fibersim ↔ STEP AP242 interface.

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

- Overview of AP242 E2 CD draft html documentation for Electrical Harness. Update of the activity model.
- Enhancements of the Venn Diagram for the Electrical Domain, with identification of main interdependencies
- Start of identification of unit test cases and draft associated validation properties for exchange and LT archiving of physical electrical harness.
- Preparation of draft SoW for LOTAR electrical pilots; extension of Core Technology pilot to CD content and draft validation properties: draft SoW available; opportunity to develop a pilot on NX for Electrical Harness
- Agreement to make the LOTAR tutorial for AP242 E2 Electrical harness publicly available once AP242 E2 CD ballot has started.
- Review of LOTAR parts planning according to AP242 ed2 & ed3 planning & content. Update of the 5 years roadmap of the LOTAR Electrical domain.

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

- Review of the status of upcoming LOTAR EAS pilot study and presentation of LOTAR EAS and STEP AP209 e2 to CAE vendors, to inform them of the setting up of a CAE IF in 2017 (part of the CAx-IF), focused first on Structural Analysis interoperability.
- Discussion of the test/success criteria and validation properties to set up for structural analysis.
- Review of [AP209 public website](#) and proposal of improvements.
- Welcome of a new member of Airbus in the LOTAR EAS working group.
- Review of the structure of Part 600 “Fundamentals and Concepts”.
- Organization of a conference call with [NAFEMS](#) top management and finalization of the LOTAR EAS – NAFEMS MoU for signature, and initiated discussion on future collaboration items.