

Summary of the virtual LOTAR International Workshop 20 - 29 June, 2023

The Q2 2023 LOTAR workshop was well attended by over 30 participants. Below are the highlights of the meeting.

Project Management:

- During the Opening Plenary meeting expectations were reviewed and a quick 2-5 minute outlook (single slide) provided by each WG leader on plans for the week.
- Each WG shall create a ~2-page presentation about their project that will become part of the “LOTAR 101” presentation:
 - The goal is to have "marketing materials" to gain new users as well as vendors.
- Adjusted Budget plan is needed due to reduction in European membership contribution.
- prostep ivip will increase the daily rate for service providers in 2024 by 15%.
- Meeting dates 2023:
 - 3rd Qtr. Workshop: 17-21 September 2023; Phoenix, AZ, USA in conjunction with GPDIS
 - 4th Qtr. Workshop: 27-30 November 2023; Online Meeting
 - All meetings in conjunction with MBx-IF Workshop
- Proposed meeting dates 2024:
 - 11-15 March 2024 Darmstadt (prostep ivip)
 - 17-21 June 2024 (preferred), or 10-14 June; Online (PDES, Inc.)
 - September 2024; exact date and location tbd, USA (PDES, Inc.)
 - 2-6 December 2024; Online (prostep ivip)

General Sessions:

- Editorial rules and processes between Europe (ASD-STAN) & America (AIA) for publishing LOTAR standard documents still differ. Examples and clarification need to be developed.
- The work groups need to prepare presentations for the Standards Track of GPDIS in September.
- Discussion about the handling of large amounts of files/large size of generic data such as Office files. The proposal could be an ISO Office standard, CSV or PDF. In some cases, the data could also be software for simulation or calculation. A list of generic data would be useful. Should be added to regular Basic & Common Parts meetings.

WG “LOTAR Basic & Common Process Parts” (Parts 00x and 0xx)

- Reported out:
 - Still a substantial workload to review the editorial comments of parts.
 - Part 003 can go internal ballot.
 - Part 007 has been published as prEN.
 - Part 010 can go for external ballot.
- Special meeting led by Dan Ganser (Gulfstream) about commonly used formats, e.g., archiving huge amounts of data and large files as spreadsheets or documents in formats that are broadly used today.

WG “LOTAR 3D Mechanical CAD and PMI” (Parts 1xx)

- Part 100 distributed for balloting.
- Part 120, 121, and 125, the review was started for ASD Stan comments.
- Finalize the LOTAR assembly PMI pilot 1 based on a trial schema of STEP AP242 edition 4
- EWIS-and CAx IF WGs held a common session to review common requirements:
 - clipping plane,
 - external element references.
- MBx-IF viewer requirements prioritization was discussed further.
- Dedicated session about Composites.

WG “LOTAR Product Data Management” (Parts 2xx)

- Harmonized prEN/NAS versions of Part 210 “as designed” and distributed for balloting. Comments reviewed and included.
- Review of the use cases from the PDM WG to the PDM-IF was held.
- Continuing progress with Part 230 revision – focusing on As-Maintained section.
- Start the review and update of Part 200 – Common Concepts.

WG “LOTAR of Electrical Wiring Harness” (Parts 4xx)

- Essential Information of the Part 410 document was updated.
- External element references use cases were discussed:
 - Part 21 direct references to geometry
 - AP242 Domain Model XML referencing geometry with Anchors
- Reviewed the progress of the XML Quality Checks pilot (Schematron).

WG “LOTAR of Model Based Systems Engineering” (Parts 5xx)

- Defined and agreed on 2023 SOW on archive of verification and validation artifacts (515) for Modelon.
- Defined and agreed on UC3 2023 SOW on archive of traceability artifacts (550) for University of Madrid.
- Consortia Collaboration with Smart Systems Engineering (prostep ivip), IW2023 (INCOSE TIMLM), ASSESS Initiative (NAFEMS) and SysPhyS Standard (NIST).
- Modelica Paper on LOTAR MBSE 2022 prototype.
- MBSE Archive Planning Workflow (P500 process diagram).
- Plan for LOTAR-GPDIS event, September, 2023 in Phoenix, AZ.
- Part 500 including new AIP Architecture and MBSE Workflow - Circulate for comments Q2 2023.
- Part 520 - Request industry comments Q3 2023.
- New conceptual outlines for P510 and P550.

Summary of the CAX-IF meetings

The CAX-IF Implementor Group kicked off its 52nd round of testing during the June meeting. The scope for this round of testing includes:

- Composites, for the first-time covering Engineering End Of Part and Manufacturing End Of Part (EEOP & MEOP).
- Product and Manufacturing Information (PMI), based on new test cases from NIST.
- AP242 Domain Model XML Kinematic Mechanism, in conjunction with the JT-IF.
- Persistent ID for Geometry.
- User Defined Attributes.
- Alternative Representations for Part Shapes with PMI (Exact B-Rep geometry and tessellated shape for the same part in one STEP file).

The Implementor Group held a joint meeting with the User Group. Discussions included:

- New User Group Requirements for Welding Symbols and Sheet Metal
- A review of the integration between the CAX-IF CAESAR, BRUTUS, Redmine, and ISO Jira
- A review of the Implementor Group's progress on implementing User Group requirements