L O T Λ R

Summary of the LOTAR International Workshop 8 – 10 September 2020 – On-Line

Summary:

The September 2020 LOTAR workshop was well attended by more than 40 participants in total, including several new team members. Below are the highlights of the meeting.

Project management:

- The LOTAR budget plan was reviewed and consolidated with the planned contracts to service providers for 2020
- The new structure of the parts 1 and 2 was reviewed, they are planned to be sent for ballot in 2021
- The European 2021 LOTAR project and budget plans proposal were reviewed and finalized, with 3 scenarios according to the confirmation of participation of A&D members .
- Regarding the status of standardization projects with close dependancies with the development of LOTAR parts:
  Development of information model and format standards:
    - status of progress of AP242 ed2 amendment, and of the preparation of AP242 ed3 project,
    - status of AP239 ed3 PLCS ("Product Life Cycle Support") and of part 4000 "Core model";
    - Status of development of AP243 ed1 MoSSEC
  Organization of Interoperability Forums, running test rounds between PLM solutions:
    - PDF-IF: planning of creation of the PDF Interoperability Forum, supported by PDES Inc,
    - PDM-IF: status of testing the visual issue management use case and the "as designed – as planned product structures" use case.
    - CAx-IF and EWIS IF: see summay in page 3. Meeting organized in parallel of the LOTAR meeting
- The LOTAR meeting schedule for 2021 was reviewed with a plan for 2 online meetings and 2 face to face meetings, one in Europe and one in the USA, and the coordination with the CAx-IF and EWIS-IF
- Discussions on opportunities for a regular coordination between standardization associations running joint standardization projects, some affecting the LOTAR project directly.
- The next LOTAR workshop will also be held online, 7 – 9 December 2020.

WG "LOTAR Mechanical and PMI" (Parts 1XX)

- The working group reviewed the recommended practices for holes and fasteners,
- The working group discussed the LOTAR Part 132 "Structural joins for assembly & installation",
- The first pilot for the holes and fastener was kicked off with Core Technologie.

WG "LOTAR Product Data Management" (Parts 2XX)

- The team has refined Use Cases with the PDM-IF to demonstrate As-Designed to As-Built accountability (multi-Bill of Materials). Waiting on the PDM-IF test round report from the User Group in order to discuss evolutions of LOTAR multi-views use cases.
- Advance drafts of parts 210 and 230. Update definitions to align with ISO 10303 P4000 "core model" and AP242 ed2 draft (In Work)
- Development of test datasets (toy airplane, airplane Model Based Definition demonstrator with "as design - as planned" with effectivity and configuration management
- Test environments needed in different PDM systems, such as Teamcentre, Windchill, 3DExperience, with the support of member companies
- Definition of the way of working to manage evolution of datasets for use cases (e.g. Github).

WG "LOTAR of Electrical Wiring Harness" (Parts 4XX)

- The team has prepared the 2020 statements of work for services providers to implement the LOTAR electrical pilots based on AP242 ed2.
- Update of the LOTAR 5 year roadmap for the electrical WG.
- The team has prepared the 2021 work plan of the LOTAR electrical WG.

WG "LOTAR of Model Based Systems Engineering" (Parts 5XX)

- The main focus of team's work has been the creation of LOTAR standards for MBSE. Internal draft versions of Part 500 and Part 520 have been created, reviewed and updated by the team. Actions assigned for next steps.
- An "Application Enhancement Request – Implementation of AP243" document has been created and circulated for feedback. The document describes a number of use cases where support for AP243 is required by tool vendors
- The team submitted a SOW for a Part 520 use case (request technical support from an application vendor)
- The team has completed 90% of the mapping between the manifest attributes and AP243 objects
- The team has been developing models that will be released into the Model Based Engineering Demonstrator Reference Models repository. Awaiting permission from corporate sponsors.
- The team has been investigating standards that assess the "quality of models".
- Good attendance (> 20) at the Q3 workshop. Five 1.5 hour sessions were held that combined a mixture of "progress tasks" and technical presentations. The latter included MBSE presentations from NASA/Eurostep, Bosch, AFNeT, and a review of the recent INCOSE International Symposium

Summary of the CAx IF on line meeting held on the 9 – 110 Sept. 2020

The CAx-IF wrapped up a successful 46th round of testing during the September workshop. Highlights in include:
- For Composites, exchanges were made with good results.
- First successful exchange of Kinematic Mechanism between two different STEP translators. Testing will continue in collaboration with the JT-IF
- For Semantic PMI Representation, there was great participation. Implementation and interoperability maturity continue to increase. Discussed scope extensions based on AP242 Edition 2.
- First STEP files with Persistent IDs (PIDs) were provided in this round. A presentation on the effects of adding PIDs on various elements to file size was provided.
- Improvements to NIST's STEP File Analyzer and Viewer (SFA) continue to drive the quality and maturity of commercial STEP translators.

A plethora of technical topics were discussed, and various Recommended Practice documents will be updated based on those discussions.

Summary of the EWIS IF on line meeting held on the 9 – 10 Sept. 2020

- The EWIS-IF User Group's 2 day on-line meeting covered the following topics:
  - Update of the tutorial test cases based on new XSD (AP242 ed2 amendment),
  - Preparation of test data for test rounds 2E (Catia V5 files, STEP files, etc),
  - Description of test cases for the test round 2E,
  - Coordination with the EWIS-IF implementer group to prepare the test round 2E and the test suite documents.
- The EWIS-IF Implementer Group has prepared the test round 2E, with 3 topology test cases and 2 connectivity test cases.

Summary of the MBx IF on line meeting held on the 11 Sept. 2020

In addition of the presentations of the status of progress of the CAx IF and EWIS IF (already summed up here above), presentations were given of the status of COTS STEP AP242 interfaces by the following PLM vendors and integrators:
  - Core Technologie,
  - Dassault System,
  - Datakit,
  - Elysium,
  - ITI,
  - Mitutoyo, a
  - nd of the NIST STEP file analyser and viewer.