

LOTAR

The LOTAR International Project is a working group managed under the AIA, PDES Inc., ASD-STAN and ProSTEP iViP consortium. The project goal is to develop, publish and maintain standards designed to provide the capability to archive and retrieve digital product and technical information, including 3D CAD and PDM data, in a standard neutral form that can be read and reused throughout the product lifecycle, independent of changes in the IT application environment originally used for creation. The multi-part standard covers both the information content and the processes required to ingest, store, administer, manage and access the information.

Tasks

Goals of the project include:

- Developing a standard series (EN/NAS 9300) for archival and retrieval of product & technical data
- Standardization of methods, process modules and data models
- Providing methods, process modules and data model(s) to enable long-term archiving and retrieval of CAD, PDM and technical data, including electrical, composite, analysis and other types of data
- Development of recommendations for practical introduction of long-term archiving of relevant data in the industry
- Advancement of commercial-off-the-shelf solutions based on user requirements by close cooperation with the CAX-IF and conjoined funded pilot projects

Milestones 2011

Four workshops have been conducted; two in the USA (March – Asheville, NC; September – Charleston, SC) and two in Europe (June – Toulouse, France; December – Darmstadt, Germany) with a growing number of participants.

The PMI working group completed Version 1 of the data domain specific part 120 (Archiving of 3D CAD with PMI as Polyline Presentation) and it will be sent out for official ballot end of 2011.

The PDM working group made significant progress on completing the data domain specific part 200 and continued work on part 210, as well as the development of Recommended Practices for PDM-related validation properties.

The working group on long-term archiving and retrieval of 3D Composite Design continued to refine the definitions of scope and priorities. The group also created an advanced test model and conducted a successful prototype testing including two software vendors and a university.

Coordination with the STEP AP242 project, to aid the creation of STEP entities for CAD 3D Semantic PMI Representation, 3D Tessellated Geometry and External Element References by supplying use cases and requirements, as well as supporting the harmonization of AP239 and AP242 for PDM interoperability.

New activities within the LOTAR project have been started for the long-term archiving and retrieval of 3D Electrical Harness Design data (part family 4xx) and the definition of metadata for Archiving packages. Both teams are currently defining their scope and will start regular meetings in 2012.

Deployment and continuous updates of the new LOTAR International Public website at <http://www.lotar-international.org/>

Presentations of the LOTAR project at: World Manufacturing Forum in Italy; ProSTEP iViP Symposium in Germany; 3D Collaboration and Interoperability Congress in Denver, Colorado; CATIA Operator's Exchange in Orlando, Florida; Global Product Data Interoperability Summit in Chandler, Arizona.

Outlook 2012

The following milestones are planned for 2012:

- Publication of Part 020 "Governance and Planning"

- Publication of Part 120 version 1, continued work on Part 120 version 2 (Semantic PMI Representation), with support from pilot projects and start work of Part 125 (Assembly PMI). In this context, also support of the AP242 project by communication of requirements and prototype implementations.
- Publication of Part 200 (PDM), continue to work on Part 210 and corresponding pilot projects. Publication of Recommended Practices for PDM-related validation properties.
- Draft Part 02x for “Meta Data for Archive Package” with draft Recommended Practices for AIP header file
- Start of technical work in the new working group for long-term Archiving and Retrieval of CAD 3D Electrical Harness definition
- Continuation of the support for the harmonization of STEP AP242 and AP239
- Contribution to the preparation of STEP AP242 edition 2, to support the long-term archiving of CAD 3D PMI Representation, Composites, 3D Electrical harness...
- Draft LOTAR guideline for long-term archiving and retrieval of 3D light visualization
- Integration of additional partners into the project group
- Continuation of close cooperation with the CAx-IF, including joint meetings at all four LOTAR workshop 2012
- Coordination among PLCS, AP242 and LOTAR communities toward the creation of a unified Implementor Forum for PDM
- Extension of the LOTAR public web site
- Organization of conferences for presentation of the LOTAR standards and deployment projects for awareness of Aerospace and Defence Small and Medium Enterprises (GIFAS, Q2 2012)

Participants

Europe :

Airbus, Cassidian, Dassault Aviation, Eurocopter, IAI (Israel Aerospace Industries), Safran

Americas :

BAE Systems, Boeing, Bombardier, Embraer, General Dynamics, GE, Goodrich, Honeywell, Lockheed Martin, NIST, Sandia National Laboratories, Spirit Aero

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