ASD SSG Newsletter

July 2018 Issue



AeroSpace and Defence Industries Association of Europe (ASD) is the European association representing the interests of industries in the aeronautics, space, defence and security sectors. <u>Link</u>



ASD Strategic Standardisation Group (SSG) is the governance group in charge of Aerospace and Defence digital interoperability. <u>Link</u> IDENTIFYING THE SET OF STANDARDS REQUIRED FOR AEROSPACE AND DEFENCE DIGITAL INTEROPERABILITY.

Approval of MoSSEC standard as ISO Committee Draft
Significant progress of ISO AP242 edition 2 "Managed model based 3D engineering".
Implementer Forums: CAX-IF and PDM-IF accelerate standard implementation
Step forward of ISO AP239 ed3 (Product Life Cycle Support - PLCS)
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Approval of MoSSEC standard as ISO Committee Draft

MoSSEC Business Objects The MoSSEC standard "Modelling and Simulation information in a collaborative Systems Engineering Context" Committee Draft has been successfully adopted by ISO; the project team is now preparing the DIS (Draft International Standard) for beginning of 2019.

MoSSEC edition 1 defines generic RESTful web services, with a mapping with the STEP Core Model based on the harmonization of AP242 ed2 and AP239 ed3.

Significant progress of ISO AP242 edition 2 "Managed model based 3D engineering"



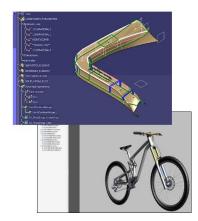
ISO STEP AP242 edition 2 Draft International Standard (DIS) is currently in ISO ballot process, ballot will close 4 Sept. 2018. It is then planned to prepare the Final DIS (FDIS) end of Oct. 2018 and **to publish the ISO AP242 ed2** "International Standard" in Q1 2019, providing significant benefits, e.g. for the exchange/sharing of Electrical Harness design.

In parallel a 5 years roadmap for further development of AP242 standard is in preparation. The scope of AP242 edition 3 will be discussed during a meeting on the 21st of Sept., in Jacksonville, USA.

If you are interested in AP242 standard, join the AFNeT – prostep ivip STEP AP242 Day on the 17 Oct. 2018 in Toulouse (<u>Link</u>)

Read more on AP242 public web site

Implementer Forums: CAX-IF and PDM-IF accelerate standard implementation



Current activities of these Implementer Forums include:

- Launch of the CAx IF test rounds <u>41J</u> (Sept. 2017 March 2018) and <u>42</u>J (March-Sept. 2018). Scope: 3D tessellated and 3D semantic Product Manufacturing Information, Composite design, alternative shapes, Kinematics (motion and mechanism), XML assembly structure.
- Launch of **CAE IF** test round <u>2S</u>, focused on FEA (Finite Element Analysis) Output data, based on AP209 ed2.
- Launch of the PDM IF 2018 activities, based on AP242 ed1. Meeting in Paris of the "User Group", with definition of new test cases (e.g. "Mountain bike") Scope of the test rounds: exchange of PDM user properties, simple configuration management, nested PDM product structure, multi lingual description and multi identification.

More information on PDM-IF website

Step forward of ISO AP239 ed3 (Product Life Cycle Support - PLCS)



A team of about 10 people is integrating Product Life Cycle Support (PLCS) standard in the new STEP enhanced architecture. Benefits expected are:

- 1) **Through Life-Cycle interoperability**, thanks to harmonisation with AP242: the harmonized Core Information Model will be proposed as shared reference for future development of STEP Application Protocols.
- 2) **Support of Integrated Logistics Support specifications**, including ASD-AIA S-Series (e.g. S3000L for Logistics Support Analysis) and SAE GEIA STD-0007).

European stakeholders fund this work through AFNeT association (S1 2018).

U.-S. stakeholders will fund the second batch (S2 2018) through PDES, Inc. association.

The ISO AP239 ed3 International Standard is planned to be published in 2019.

More information on AP239 (PLCS) edition 3 project website

Collaboration between European Defence Agency (EDA) and ASD for best practice standards in Product Life Cycle Management

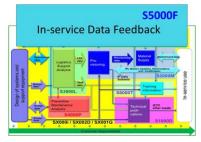


The European Defence Agency invited ASD-SSG to participate in the Expert Group (EG13) in charge of identifying the **best practice standards in Product Life Cycle Management**.

ASD-SSG will bring in expertise in through life cycle interoperability based on standards. The outcome of this group shall be included in the **European Defence STAndards Reference System (EDSTAR)** in the second quarter of 2019.

More information on EDSTAR on EDA website

Integrated Logistic Support (ILS): S5000F & SX000i adopted!



ASD/AIA S5000F, International specification for in-service data feedback, and AIA/ASD SX000i, International guide for Integrated Logistic Support (ILS) have been formally adopted by the ASD SSG and are now recommended for their use in international programs.

Read more on ASD SSG website

AP242 Benchmark #2: PDM and CAD

CAD to STEP		STEP to CAD and Viewer	
			Viewer
			3D PDF
SOLIDWORKS			SOLIDWORKS
NX Inventor Creo CATIA V5			NX te
linventor			NX Inventor eliji teđurg
Creo			Creo 🖁
CATIA V5			CATIA V5
3DEXPERIENCE			3DEXPERIENCE
	Number of interfaces 5	5 Number of interfaces	. 0
	Success Partial_success_fail	Success Partia	success fail

AFNeT and prostep ivip have published the STEP AP242 Benchmark#2 reports:

- Short report for the CAD test cases: LINK
- Short report for the PDM test cases: LINK

As an International Standard since 2014, ISO 10303 STEP AP242 is available for the Automotive and Aerospace industries, as well as many other branches of the manufacturing industry, as a unique product standard for Managed model based 3D engineering data interoperability

More information on AP242 website

STEP Extended Architecture

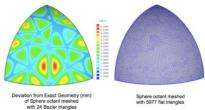


Extending the STEP architecture was identified as a key activity in February 2014 at the AIA/ASD Workshop on interoperability in Washington, D.C.

The STEP Extended Architecture allows to maintain and extend the STEP standards scope for the next years;

The STEP Extended Architecture specifications are under ballot at ISO until September 14th 2018. Contact your National Body to review these documents.

STEP Visualization Framework



ISO has established the Joint ISO/TC 184/SC 4 - ISO/IEC JTC 1/SC 24 WG: Formats for visualization and other derived forms of product data.

This Joint working group will manage to ease the consumption of the Product data based on STEP in the upstream and downstream processes by providing common methods for visualising the product data and the geometry for the various available visualisation technologies.

The work programme includes:

- Integration of STEP into the 3D PDF (in liaison with the ISO/TC 171/SC 2)
- Development of ISO 23301 "STEP Geometry Services".

AFNeT Standardisation Days



The 2018 AFNeT Standardization Days took place on May 17th and 18th in Paris. 2 multi-sectorial (aerospace, automotive, construction, maritime and rail) tracks covered all value chain activities: system engineering, design, manufacturing, logistics and support.

All presentations are available on http://download.afnet.fr/ASD2018

Long-Term Archiving (LOTAR): 3 parts sent for ballot, new MBSE working group

In May 2018, three NAS/EN9300 LOTAR parts have been sent to AIA and ASD-STAN for a 3 months simultaneous ballot:

- Part 120 ed2: Long Term Archiving and Retention (LTA&R) of CAD 3D Geometry with Graphic PMI,

- Part 121 ed1: LTA&R of Semantic representation of CAD 3D Geometry with PMI,

- Part 125 ed1: LTA&R of Explicit CAD assembly structure with Graphic PMI.

(LTA&R: LT Archiving & Retrieval; PMI: Product and Manufacturing Information)

 1^{st} LOTAR meeting held on the 12 - 15 March (Ashville, USA): $\underline{Summary}$,

2nd LOTAR meeting held on the 19 - 21 June (Toulouse). Launch of the LOTAR MBSE WG, and preparation of the draft 2019 LOTAR project plan.

Read more on LOTAR website

Next events:

- AFNeT-Prostep STEP AP242 Day, 17 October 2018, Toulouse France, link
- S1000D User Forum and S-Series ILS Specifications Day, 10-13 September 2018, New Orleans, USA, link
- Global Product Data Interoperability Summit, 18-21 September 2018, Phoenix, Arizona USA, link
- ASD Product Support and Specification Group meeting, 24-25 October 2018, Paris France
- ISO/TC 184/SC 4 (Industrial Data) meeting, 4-9 November 2018 in Chicago USA
- ASD Strategic Standardisation Group meeting, 21-22 November, Airbus Toulouse France
- PDM-IF user and implementer group meetings, 5-6 December, Darmstadt Germany



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