

Jotne Connect

Vendor Update



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PDM since 1996
Eurofighter
Airbus
Leonardo
BAE Systems



Space since 2003
Today Digital Twin
Spacecraft

AIRBUS



LOCKHEED MARTIN



STEP since 1999
SimDM (FEM)



F-35 FACO Since 2011
Leonardo
Crystal
Today REPLAY

Jotne software applications

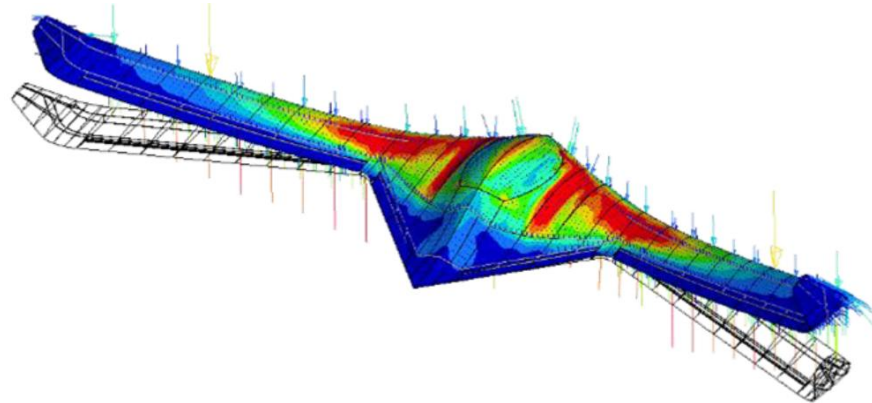


PLM Interoperability and Technical Data Packages (TDP)

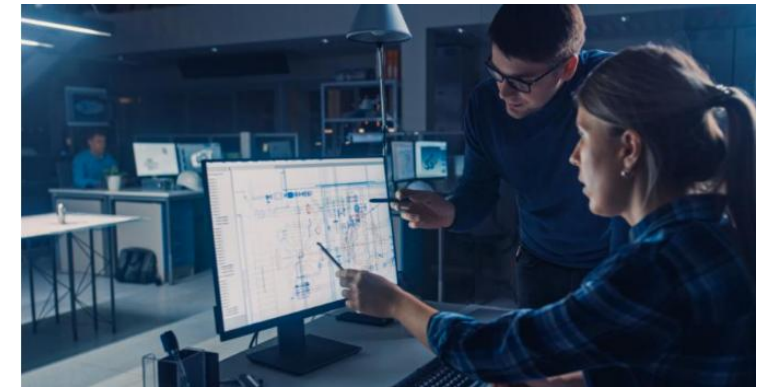
Utilizing AP239 & AP242 including external Data Reference Libraries



Based on AP209 for Simulation Data Management-FEM and specialized AP209 viewers.



Supports any ISO 10303 data model for translator and data sharing applications. Used by Software vendors and integrators as well as leading ASD OEMs



Continuously adding new features and improving performance. Download recent versions or contact helpdesk@jotne.com

EDMtruePLM – Capabilities (Q3-2026)



MAIN CAPABILITIES

Standardized Data Exchange



Import/Export

- Ability to export TDP in DDI format
- AP242 DM export for TDP and round trips

➔ Enables interoperable product data exchange

Data Validation & Quality Control



AP242 MIM/DM AP239

- Validation of data models for schema compliance
- Introduced end-to-end testing for TDP data

➔ Ensures standard-compliant product data

Configuration management



Baselines on historical versions

- Ability to capture snapshots of historical versions
- Introduced document metadata versioning

➔ Improves configuration management

System Integration



Redesigned REST APIs

- Easier to integrate with EDMtruePLM web application
- User management APIs

➔ Simplifies integration with external applications

PLATFORM ENHANCEMENTS

UI/UX Improvements

- GUI redesign
- Table view for project data
- Saved search functionality
- TDP file preview
- Improved notifications

Administration and Flexibility

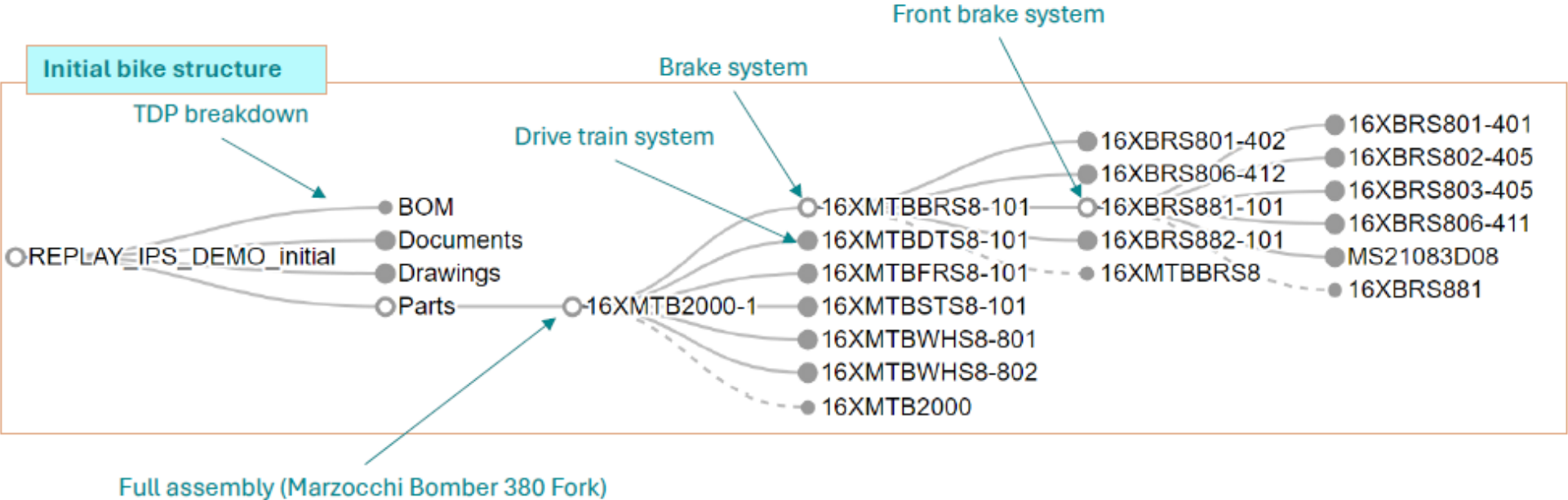
- Reference Data Library - RDL
- GUI configuration
- Improved administrator pages
- Document record without file body

20+ improvements across data exchange, validation, UI/UX and configuration management

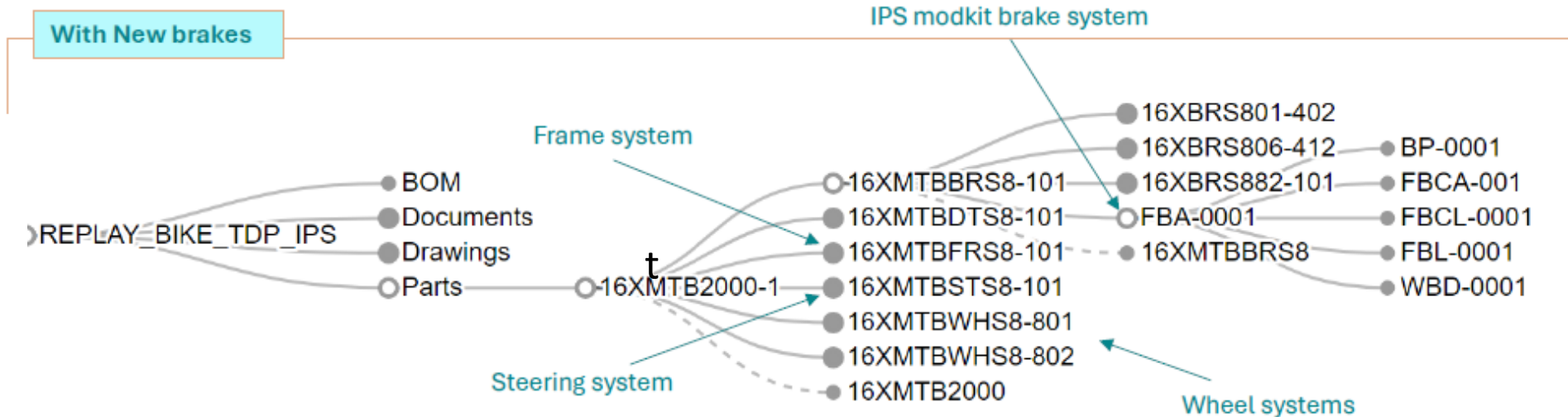
Graph representation of Configuration Management



Version 1



Version 2



TruePLM capabilities for Technical Data Packages (TDP)

Figure below shows the Bike TDP data with assembly + parts

 EXPRESS Data Manager
TruePLM™

jotne_tt(project_manage

Projects      test_cdm_import_2 Parts 16XMTB2000-1 16XMTBBS8-101

Table view 

Name	Type	Description	cage_code
16XMTBBS8-101	DomesticAssembly	BRAKE SYSTEM	98897
16XBRS801-402	DomesticPart	FRONT, BRAKE LEVER ASSY	98897
16XBRS806-412	DomesticPart	BRAKE, FRONT, BODY	98897
16XBRS881-101	DomesticAssembly	BRAKE, FRONT	98897
16XBRS801-401	DomesticAssembly	BRAKE, LEVER, FRONT, ASSY	98897
16XBRS250-101	DomesticPart	BRAKE LEVER FRONT	98897
MS35650-103	Part	NUT	81755
NAS5313E3-7	Part	SCREW	80205
16XBRS802-405	DomesticPart	BRAKE, HYDRAULIC LINE, FRONT	98897
16XBRS803-405	DomesticAssembly	BRAKE, FRONT, ASSY	98897
16XBRS008-101	DomesticAssembly	BRAKE, DISC, ASSY	98897
16XBRS805-003	DomesticPart	BRAKE, DISC ASSY	98897
NAS1132-2	Part	SCREW	
16XBRS810-401	DomesticAssembly	BRAKE, CALIPER, FRONT, ASSY	98897
NAS1351-4-6P	Part	SCREW	
16XBRS806-411	DomesticAssembly	BRAKE, FRONT, BODY	98897
16XBRS415-3	DomesticPart	BRAKE LEVER HOUSING	98897
16XBRS416-11	DomesticPart	BRAKE LEVER HOUSING SEAL	98897
16XBRS521-9	DomesticPart	BRAKE LEVER	98897
NAS1351-03-8P	Part	SCREW	80205
NAS1351-06-4	Part	SCREW	80205
NAS1352-04-8	Part	SCREW	80205
MS21083D08	Part	NUT, SELF-LOCKING, HEXAGON	
16XBRS882-101	DomesticAssembly	BRAKE, REAR ASSY	98897

Figure below shows the version history Product structure where an assembly has been replaced

Comparing project data versions

INITIAL BASELINE

Path: 16XMTBBS8-101

16XBRS801-402 v.1 0/0

16XBRS806-412 v.1 0/0

16XBRS881-101 v.1 5/0

16XBRS882-101 v.1 3/0

LIST OF DIFFERENCES

Name	Element	Difference	Version (left)	Version (right)
16XMTBBS8-101	DomesticAssembly	Modified	1	3
16XBRS881-101	DomesticAssembly	Removed	1	
FBA-0001	DomesticAssembly	Added		8
WBD-0001	DomesticPart	Added		13
FBL-0001	DomesticPart	Added		18
FBCL-0001	DomesticPart	Added		23
FBCA-001	DomesticPart	Added		28
BP-0001	DomesticPart	Added		33

DETAILS

Property name	Value - Left version	Value - Right version
Version	1	3
Structure		
Nr of children	4	4
Nr of files	0	0
Assigned properties		
cage_code	98897	98897
part_nomenclature	BRAKE SYSTEM	BRAKE SYSTEM
dash_no	-101	-101

IPS MODIFICATION

Path: 16XMTBBS8-101

16XBRS801-402 v.1 0/0

16XBRS806-412 v.1 0/0

16XBRS882-101 v.1 3/0

FBA-0001 v.8 5/0

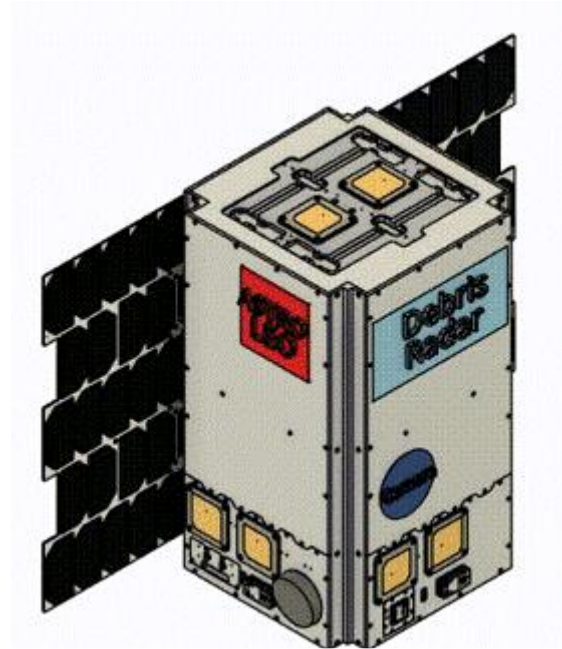
DIGITAL TWIN FOR SPACE APPLICATIONS

Data exchange and sharing throughout Engineering, Simulation, Manufacturing, Assembly, Integration & Testing (MAIT)

Using open standards such as ISO 10303, for PLM, MBSE, CAD, FEM, IoT and more



Jotne internal Use Cases relevant for CAX-IF

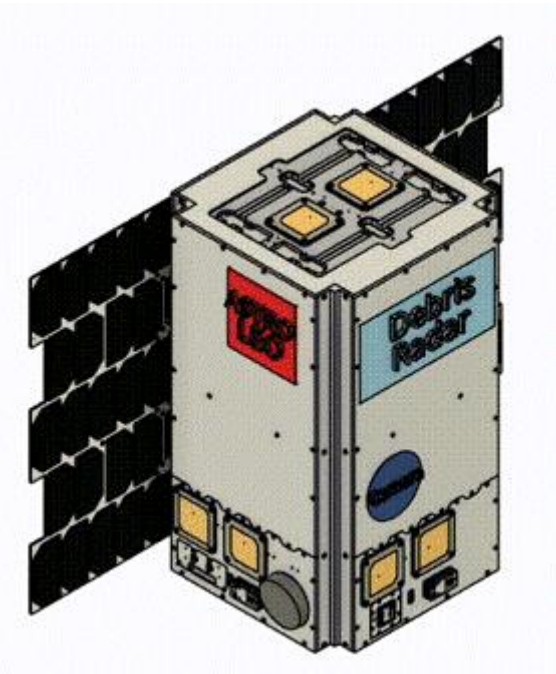
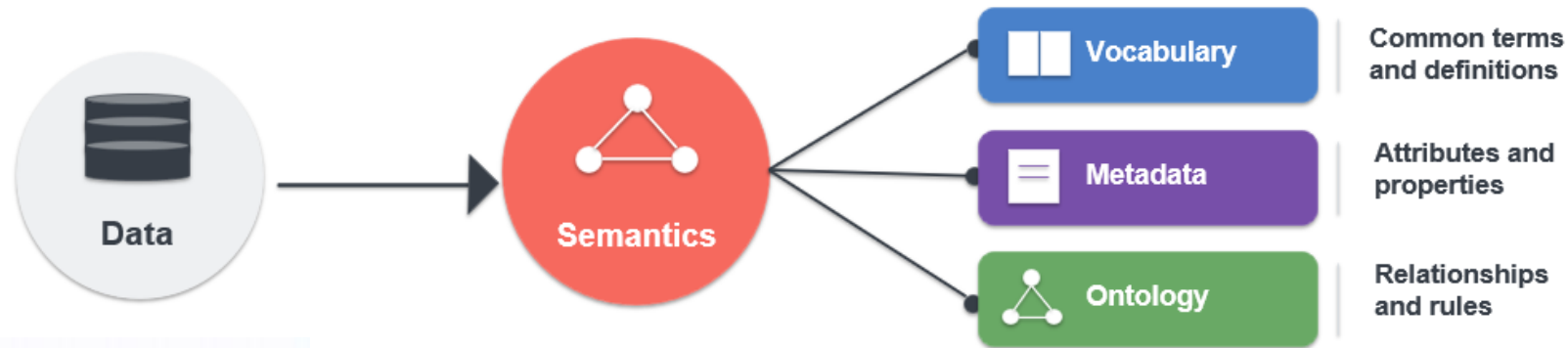


CENSSAT-1
16 Cubesat
PDR last month,
launch 2027
CENSSS.NO



Radiation Monitor
for all Galileo Satellites
Technical Data Packages
IDEAS.NO

Ontology Pipeline



Vocabulary

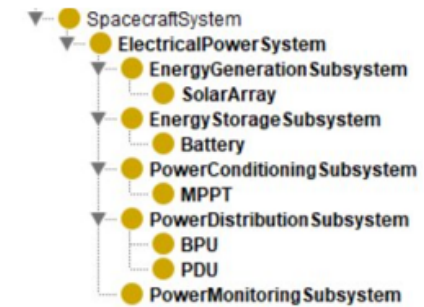
BAT28V-P4

Each Battery BAT-P4 is 8 cell lithium-ion battery system

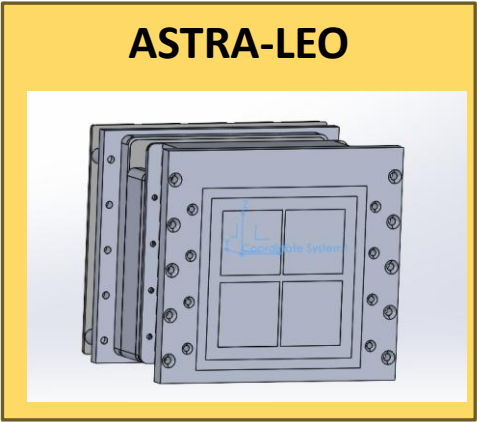
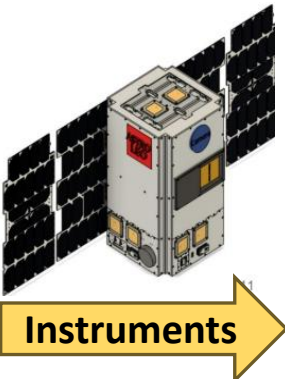
Metadata

U	Name		Value
1	Provider	T	Space Inventor
2	Quantity	N	2
3	Unit Mass	kg	0.706
4	Mass Margin	%	5
5	Total Mass	kg	1.483
6	Consumption Mode	E	Standby

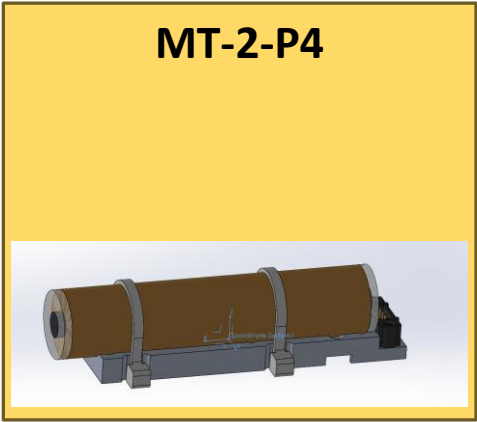
Ontology



Examples from CENSSAT-1 instruments and parts



Radiation monitor



AOCS Sensors and Actuators



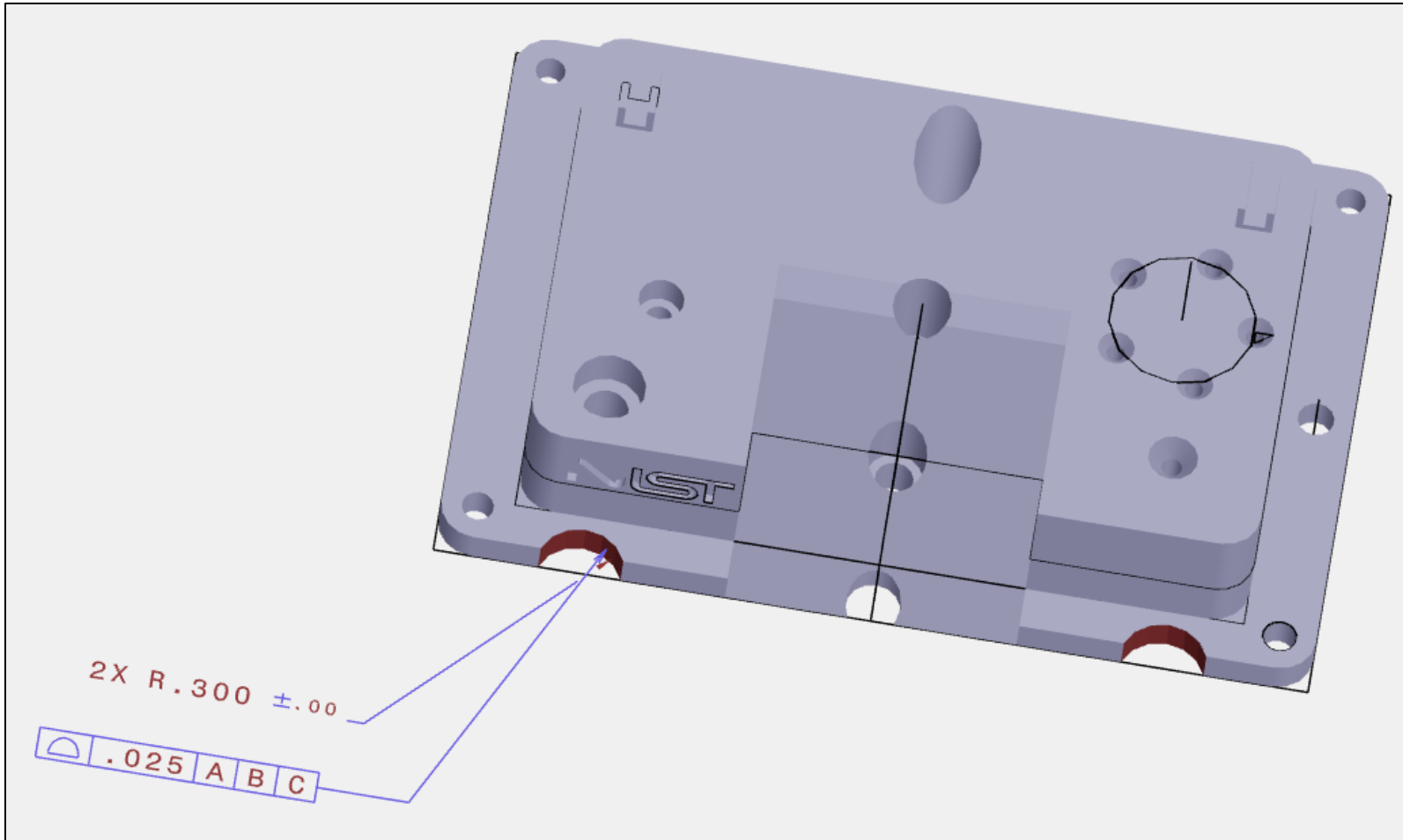
Auroral Radiometric Camera

Mass	CoG	Mol
2.0	0.66182838	0.00262899
	0.90766538	0.00000156
	1.31744858	-0.00000154
		0.00000156
		0.00314775
		-0.00002565
		-0.00000154
		-0.00002565
		0.00258536

Mass	CoG	Mol
0.115	0.0045111	1.2110e-05
	2.68e-05	0
	0.0069846	8.4098e-07
		0
		1.4885e-04
		0
		8.4098e-07
		0
		1.4784e-04

Mass	CoG	Mol
0.6	0.08	0.015
	-0.001	0.00006298
	0.138	-0.009
		0.00006290
		0.021
		0
		-0.009
		0
		0.006

New: EDMtruePLM Part Viewer shows PMI from STEP files



What the viewer now does

- **Reads PMI** (dimensions, tolerances, datums) stored in the STEP file with the 3D model
- **Displays each annotation** on the model, with leader lines to the feature it controls
- **Shows the PMI for a selected element**, e.g. 2X R.300 radius and a .025 profile tolerance to datums A|B|C
- **Reviewers see design intent in 3D** without opening a separate 2D drawing

TRUEPLM as Trusted Digital Repository - ISO 16363 Certification



AUDIT SCOPE — 109 METRICS ACROSS THREE CATEGORIES

Organisational Infrastructure
Governance, mission, policy, resourcing and sustainability

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Digital Object Management
Ingest, preservation, integrity, access and use

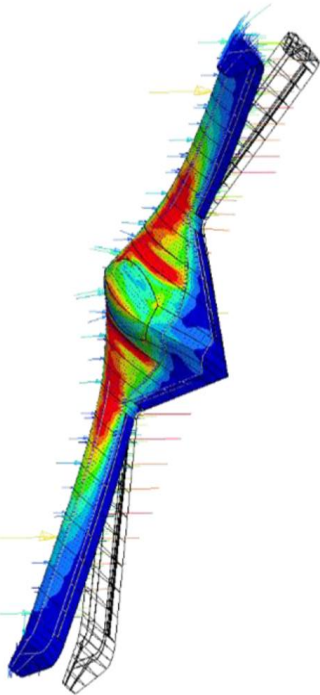
52

Infrastructure & Security Risk Management
Infrastructure, security, backup, recovery and risk

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EDMopenSimDM – Capabilities (Q3 2026)



Main CAPABILITIES

Engineering Documentation



Narrative Feature

- Embedded text editor
- References to nodes in product structure
- Links to 3D graphical views

➔ Better documentation of product structure

Requirements Integration



SAR – System Accommodation Req.

- Add requirement sub-trees to product structures
- Link requirements to design and analysis data

➔ Enable requirement-driven engineering

Web Accessibility



Web Client

- Browser-based access to EDMopenSimDM
- No local client installation required

➔ Improves accessibility for users

Flexible Data Modelling



Reference Data Library - RDL

- RDL is the main actor for project definitions
- Flexible node-types and dependency management via RDL editor

➔ Enables flexible project definitions

PLATFORM ENHANCEMENTS

UI/UX Improvements

- Form and feel improvements
- More intuitive common operations
- Stability improvements and refactoring



NASTRAN -> AP209 Converter Extension

- Support for additional NASTRAN cards.
- Converter now handles non-structural mass, concentrated mass and properties for composite elements

Data Converters and Visualization



STEP-TAS -> GLTF In Development

- Web visualization of STEP-TAS models
- Conversion between STEP-TAS and GLTF representing product structure, thermal nodes and material properties

Improved requirements integration, web accessibility, engineering documentation, and flexible project data modelling

EDMsimDM in a joint ESA project with Airbus

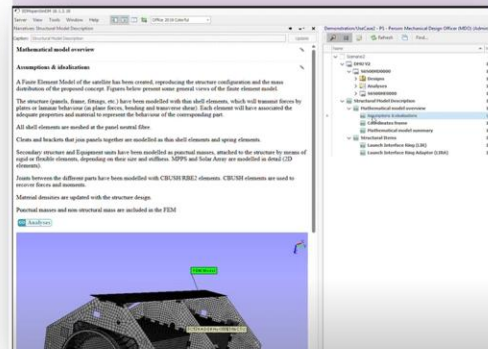
UC-1. SAR and DMU Consolidation

- SAR creation and Compliance review
- Design Description creation
- SAR Customer Review



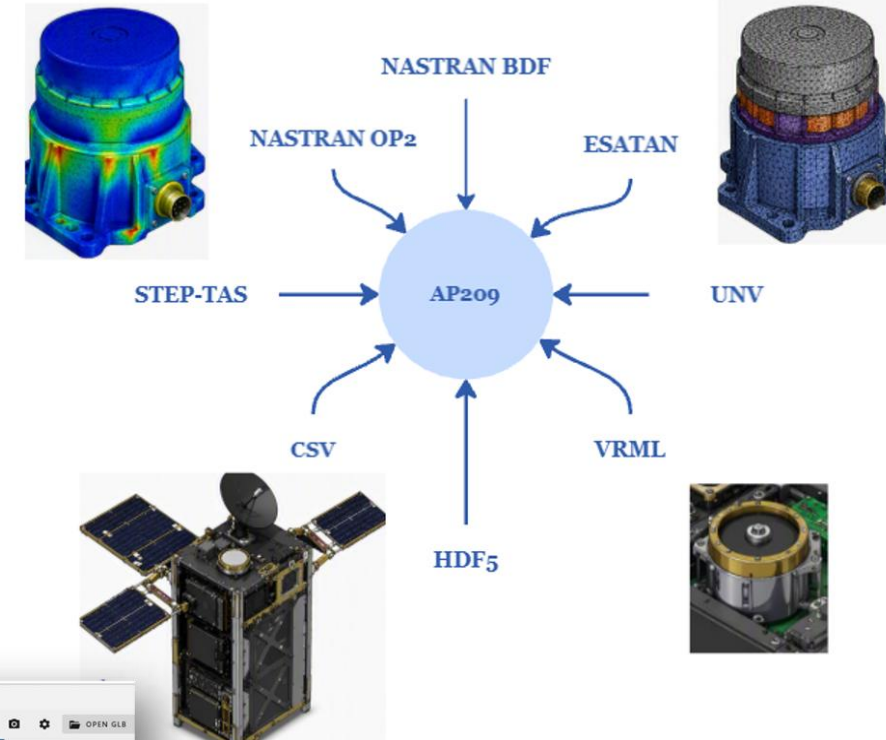
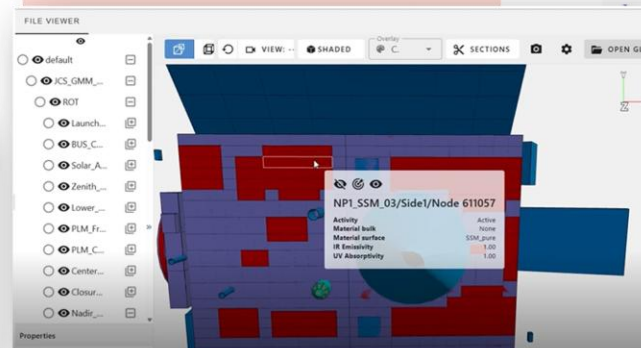
UC-2. Structural Analysis Results Generation, Review, and Supplier

- Structural Model Description creation and FEM-NASTRAN data upload using AP209 Converter
- Supplier Data upload and linking
- Structural Design Review



UC-3. Thermal Data Visualization

- Thermal Model Description creation, STEP-TAS data upload using AP209 Converter, and visualization



Upcoming events

Norway at [Space Tech Expo Europe](#) in
Bremen 🚀
Mark your calendar for 17-19 November.



[Jotne](#) has a long legacy running [R&D projects](#), some of the recent projects are highlighted on the [Jotne web](#), and of course at the [EU Cordis portal](#). We look forward to discussing with your teams for new opportunities, please send your interest to helpdesk@jotne.com



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Thank you for
your time,
your energy,
and your invaluable insights.