

From idea to manufacturing and operations

Share, exchange and archive your PLM data



Exploring the Digital Twin by using Open Standards

ISO 10303 (STEP)

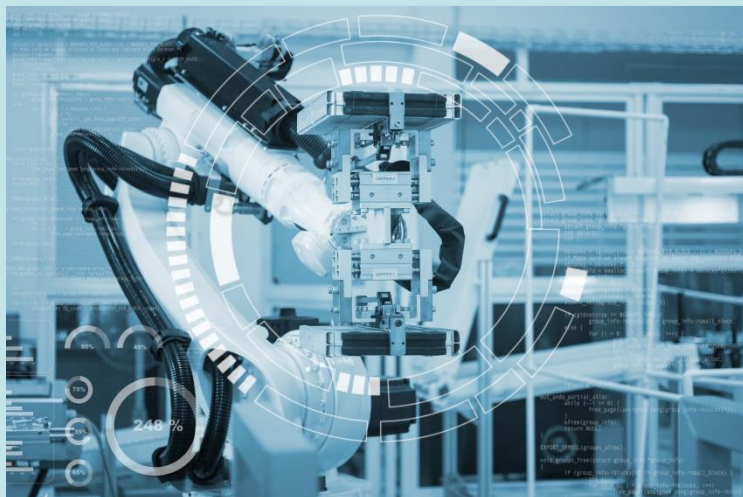
ISO 10303, also known as STEP (Standard for the Exchange of Product model data), is an international standard that plays a crucial role in supporting various industries. It provides a standardized approach for representing and exchanging product data, enabling interoperability, collaboration, and efficiency across different stages of the product lifecycle. ISO 10303's wide adoption and support have made it an essential tool for industry players worldwide.

One of the key benefits of ISO 10303 is its ability to facilitate seamless data exchange and integration between different software applications and systems. In industries where multiple software tools and platforms are used, such as manufacturing, engineering, supply chain management, and maintenance, ISO 10303 ensures that data can be accurately and consistently shared, interpreted, and utilized. This eliminates the need for manual data translation or conversion, reducing errors, time, and costs associated with data interoperability when it comes to Digital Twin that uses information from CAD, PLM, Technical Data Packages, Simulation, Test, Manufacturing, and Operational data.

Digital Twin

The Digital Twin concept has emerged as a powerful approach to optimize the design, development, operation, and maintenance of complex systems. It involves creating a virtual replica or digital representation of a physical asset, such as an aircraft, spacecraft, or defense system, and using it to gain insights, monitor performance, and simulate scenarios throughout its entire lifecycle. Open standards like ISO 10303 play a crucial role in enabling the implementation of Digital Twins in industries such as aeronautics, space, and defense, where long lifespans and complex requirements are prevalent.

Digital Twins enable real-time monitoring and predictive maintenance. By continuously collecting and analyzing data from the physical asset and comparing it to the digital representation, organizations can detect anomalies, predict failures, and plan maintenance activities more efficiently. This proactive approach minimizes downtime, optimizes asset utilization, and improves safety and reliability. These insights empower stakeholders to make informed decisions, optimize resource allocation, and enhance operational efficiency.



Why TruePLM?

TruePLM is a scalable solution for engineers that need to manage their PLM/CAD/TDP and its related master data information using either portable devices, a multi-user server system within the firewall or multi-organization cloud-based subscription services. Large and complex products such as aircraft, vehicles, oil and gas installations and ships depend on accurate engineering information for their successful operation and maintenance throughout a life cycle often measured in decades. This life cycle normally depends on a wide diversity of computer systems and information formats, which itself becomes a barrier to effective communication of engineering information across the supply chain. By using a common standard, we can eliminate the unnecessary cost of manually converting or re-entering information between different computer systems.

The ISO 10303 standards covers the widest cross section of engineering applications. ISO 10303 STEP (Standard for the Exchange of Product Model Data) has been in use since 1994 to facilitate the flow of engineering information in both civil and military environments. The TruePLM solution has been designed to provide maximum capabilities to companies executing concurrent engineering strategies.

TruePLM will help its users to:

- Increase Data Management Capabilities
- Support of concurrent processes and document dependencies
- Consolidate design models in a repository based on open standards compliant formats.



- Increase Document Exchange Effectiveness
- Archive data in an open standard format, ISO 10303
- Improve communication with contractors and partners, using open and publicly available standards



- Support information longevity and Long-Term data retention
- Improve Information Quality Management
- Create solutions for Life Cycle Data Management



TruePLM offers

- Reference data
 - Document properties
 - Product breakdown structure
 - Context/file menu
 - Breakdown element properties
 - 3D Viewer



Supporting the Digital Thread

Today's manufacturing industries are under continuous pressure to deliver competitive products faster. At the same time, they must reduce the development cost and the cost of product ownership. In addition, they must protect their intellectual property while working in shared environments while and sustaining business growth and competitiveness. In order to achieve this goal, collaboration across the product development lifecycle is critical. Unfortunately, collaboration introduces many complications that must be addressed to ensure the integrity and consistency of product development information. These product development processes now also span increasingly complex business environments that bring together multiple companies, each with their own systems and processes.

The Jotne approach to this problem is to establish and use a common or master data unified repository in which product and process information from many sources (such as systems, companies, etc.) can be merged and consolidated. The TruePLM repository is designed to handle many product versions and configurations and distinguish between information packages received from multiple suppliers and partners delivered to many customers. Using the ISO 10303 standards the Jotne solution addresses your requirements of interoperability, and Long-Term Archiving and Retrieval (LOTAR) as defined by the AIA/ASD standardization efforts.

The concept of a Digital Thread refers to the integration and synchronization of digital information throughout the lifecycle of a product or asset. It involves creating a seamless flow of data from design and engineering through manufacturing, maintenance, and beyond. The goal is to provide a holistic and real-time view of the product's data, enabling improved collaboration, decision-making, and analysis across various stages and stakeholders.

ISO 10303 plays a significant role in supporting the implementation of Digital Thread by facilitating the seamless transfer and integration of data between different software applications and systems. This standardized representation ensures that data can be accurately and consistently interpreted by different systems, regardless of the software or platform they use.



Empowering Your Business with Cutting-Edge Interoperability Solutions

Jotne is a leading provider of advanced engineering software solutions for the Aerospace, Defence, and Space industries. The company's applications offer a comprehensive suite of tools for managing the entire product lifecycle, from concept design to product retirement and it help organizations optimize their product development processes and increase efficiency.

A Legacy of Innovation and Excellence

Grown up in the ISO 10303 standards, Jotne has been a pioneer in the product lifecycle management (PLM) industry for over 25 years. Our mission is to empower businesses with innovative and robust interoperability solutions that streamline product development processes, enhance collaboration, and improve overall efficiency. At Jotne, we understand the critical importance of staying ahead of the curve. Our dedicated research and development team is constantly exploring new technologies, methodologies, and industry best practices to ensure that our software remains the gold standard in the industry solutions. By investing in the future, we're able to provide our customers with unparalleled performance, scalability, and adaptability.

Trusted by Industry Leaders Worldwide

Jotne software is trusted by a diverse range of industry leaders, spanning sectors such as aerospace, automotive, manufacturing and more. Our client list includes globally renowned organizations like Lockheed Martin, Airbus, European Space Agency, Leonardo, BAE Systems, all of whom have experienced the transformative impact of our cutting-edge interoperability solutions.

Jotne software has revolutionized the way customers manage their product development processes, helping them achieving faster time-to-market and reduced costs.

The TruePLM Application

TruePLM is Jotne's flagship product lifecycle management (PLM) application. TruePLM offers a comprehensive set of tools for managing the entire product lifecycle, from concept design to product retirement. The application is designed to help organizations optimize their engineering processes and increase efficiency by providing a centralized platform for managing data, processes, and workflows.

One of the key benefits of TruePLM is its ability to facilitate data exchange, sharing, and archiving. In the ASD industries, data exchange is a critical component of product development processes. Organizations need to be able to share data quickly and efficiently between different teams and departments, while also ensuring that data is secure and protected.



Open Standards to meet your objectives

Jotne Connect is the leading provider of product data solutions, based on open standards such as ISO 10303 (STEP), which we have been developing since 1994, providing interoperability solutions for Industrial Data applications. Our products have successfully reduced development and product lifecycle costs through the use of intelligent data management in a variety of industries. These include but are not limited to defense, aeronautics, space and built environment, deployed in CAD/PLM/Simulations/Testing/Technical Data Packages and the logistics domains.

Open, publicly available, and international standards offer a basis for the integration of diverse technologies into complex, innovative systems and solutions. This enables interoperability between components, avoids vendor lock-in for products and services and provides more choice for customers globally. Open standards improve data exchange, sharing and archiving processes, cutting both time and cost, while also improving quality.

Our solutions and services ensure long term access and ownership of data, independently of vendors and cloud storage type. We also enable data access and storage on premises for safety and security, including digital twins and their servers.

We connect people and systems with the data they need

Jotne Connect invest in the most advanced research and development projects originating from the EU and the European Space Agency (ESA), such as Horizon Europe, European Defense Funds and ESA's technology development programs. These research projects cover new ground in industrial solutions, digital twins, open standards, archiving and sharing of information, user-friendly applications with the support for AI/ML analytics, and more. We also recruit talented graduates from leading universities from all over the world, and sponsor PhD students.

Jotne is a leading provider of advanced engineering software solutions for the Aerospace, Defence, and Space industries. The company's applications offer a comprehensive suite of tools for managing the entire product lifecycle, from concept design to product retirement and it help organizations optimize their product development processes and increase efficiency.

