Open Simulation Data Management
Release, Distribute and Archive your Simulation data

Using ISO 10303 STEP, PLCS and LOTAR

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 have to protect their intellectual property while working in shared environment while 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 in order 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.

In the past most analysis organizations have maintained their simulation and analysis data and processes separate from the broader enterprise’s product definition information. This has been due to a number of factors including the large data sets required, and essential differences between analysis data models and design data models. Investments in simulation and analysis have typically been targeted at focused technologies used by specialists to more precisely analyze the performance of alternative product designs, with simulation and analysis treated as a specialty area that is rather disconnected from the overall product development organization. Simulation investments typically have not focused on linking simulation more effectively into the broader enterprise.

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. This repository must be 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 Open Simulation Data Management (Open SimDM) solution addresses your requirements of interoperability, and Long Term Archiving and Retrieval (LOTAR) as defined by the AIA/ASD standardization effort of the same name.

Benefits of the use of Jotne Open SimDM:

• Reduces the time for your Design related Simulation data management and documentation.
• Supports the collaborative configuration management of Simulation and Design data.
• Eliminates the unnecessary cost of maintaining many applications and manually converting or re-entering information when using different computer systems.
• Representation in ISO 10303, commonly called STEP, ensures the availability of your data over time.

Data exchange | Data sharing | Data archiving
Capabilities, using the Open SimDM software

- Provide the mechanisms for single access to product structure, CAD models, and CAE simulation data of engineering programs and your integrated teams
- Perform user friendly product data management tasks in the engineering analysis phase
- Allow your customers to have access to simulation information for maintenance and support
- Enable cost-effective life-cycle processes
- Prepare approved program analyses for long time archival
- Reuse engineering information
- Manage resources for engineering tasks
- Lower the threshold for interfacing analysis tools to AP209e2, connect your own applications
- Provide extensive graphical and textual browsing capabilities for AP209e2 data
- Data Exchange and Integration tool-kit (SDK)
- Interoperability with native FEM data, like NASTRAN (tm)
- Support your IT team with capabilities of: Data modeling, Database management, Rule engines and Web services for interoperability

Management of CAD and Simulation Data

- Multi-user collaborative environment
- Organize your program data in repositories and models
- Manage files on product structure level
- Create multiple product structures, automatically from STEP-files or manually
- Link design and analysis items by drag-and-drop
- Assign properties to product structure items
- Upload and download files
- Automatic creation of meta data, like timestamp and creator
- Add files to design and analysis items
- Support for various file formats, including AP209e2
- Manage distributed and local files in database
- Assign resources and methods to tasks
- Provide task feedback
- Peer approval and final approval
- Versioning of items in product structures
- Create baselines for all or parts of a structure
- Validate data provided in STEP-format
- Search in meta data

Archival and retrieval of data packages

- Export an entire product structure or parts of it as “Data package”
- Export baselines
- Archive for the long term according to LOTAR stds
- Import product structures from STEP files
- Import archived programs and baselines
- Validation and verification of ingest/retrieval processes

Viewing of design and engineering data

- Browse in product structures like in folders
- Execute textual queries into AP209e2 data
- Run survey queries to find critical spots in analyses
- View files with your favorite tools
- Browse analysis data, native and AP209e2, graphically with the 3D Viewer

Access control

- Login access control
- Separation of responsibilities into manager, editor and reader
- Locking of product structures
- Open Standard API and Web services
- Customized access control for
  - product structures and their elements
  - low level assignment of roles