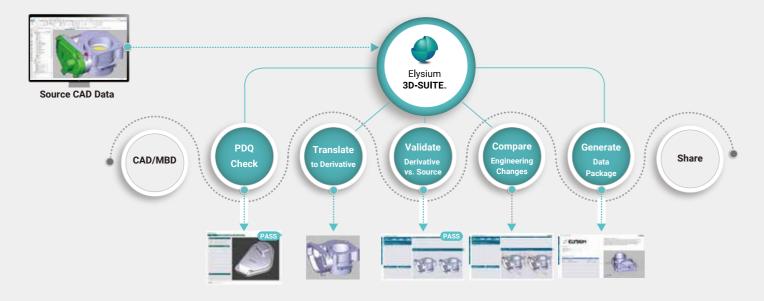


# POWERFUL. FLEXIBLE. LIMITLESS.

Your 3D digital data can be connected, enriched, and ensured by the modular interoperability platform

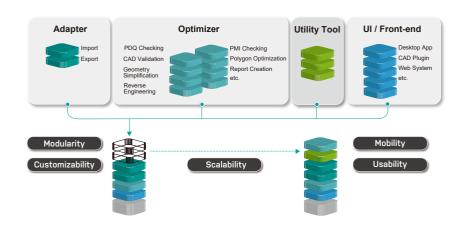
### Streamlining MBE with Single Point Automation

Leveraging a single provider for the multitude of essential processing steps within an MBE data lifecycle streamlines capabilities, support, integration, configuration, and upgrades over time. This allows for extreme flexibility when workflows need to be adapted as data, processes, and cultures evolve.



### Digital End-to-end Interoperability with Maximum Flexibility

Elysium 3D-SUITE focuses on providing you the capabilities you really need. Freely pick the modules and aggregate them to your individualized solution that matches your engineering and business requirements.





### All-in-one Platform to support your MBE Lifecycle

### **Components** Provide all the essential technology pieces to support digital end-to-end engineering processes

### **Adapters**



Importer



**Exporter** 

Adapters enable you to translate 3D data, including geometry, structures, attributes, and PMI.



### **PMI Checker**

Automatically verifies the consistency of PMI (Product Manufacturing Information) in CAD models in compliance with ISO and ASME standards.



### **Reverse Engineer**

Run reverse engineering. Automate the process to create CAD surface models from polygon data.







### **PDQ Checker**

Run a quality check for CAD models. Perform PDQ(Product Data Quality) checking following PDQ guidelines for SASIG, JAMA, JAPIA and VDA.



#### DFX

Recognizes specific CAD geometries to automate tasks traditionally done manually, supporting DFM and more.



#### **CAD Validator**

Compare two CAD models including geometry, assembly structures, attributes, and PMI. Optimal for derivative validation and engineering change communication.



### **Geometry Simplifier**

Simplify CAD geometry. Remove specific features, delete and combine components, and create envelope solids.



### **Polygon Optimizer**

Perform quality checks and optimize polygon data.



### Mid Surfacer

Semi-automatically create mid-surfaces from solid models.



### **ENF Editor**

Edit or extract information contained in ENF, such as assembly structure, color, attributes, and PMI by calling API from a Ruby script.



#### **Report Creator**

Output PDQ Checker / CAD Validator results into a 3D PDF or 3D HTML report.



### Utility Tool Configure the settings of 3D-SUITE components with intuitive utility tools



### Data Package Studio

Customize 3D PDF outputs from 3D-SUITE with this plug-in to the Adobe Acrobat Pro product line.



### Scenario Editor

Create scenarios to be reused. Define the order of processing steps and configure the individual parameters.



### Validation Configurator

Customize comparison processes performed by CAD Validator.

### **Front-end** Support your desired use cases through multiple front-ends

Viewer	Desktop application to visualize 3D model data in ENF format and compare result output by CAD Validator.	Editor	Desktop application to visualize, translate and edit 3D model data. (Equivalent to our older product, CADdoctor)
SmartLauncher	Application to run Component processing from CAD plug-in menu as well as Windows context menu.	SmartController	Simple Batch application to process multiple 3D model data together on a single computer.
SmartController Pro	A high-end version of SmartController to provide full batch functionality via execution on multiple computers.	TransServer	Web-based server and client system to execute the process with load distribution, user management, and Web API.









# Product Data Quality Check & Healing

Identify the root causes for geometry errors and easily repair them with the leading-edge solutions

### Ensuring sharable, consumable and manufacturable 3D models

Elysium 3D-SUITE provides advanced PDQ verification and powerful healing capabilities to automate the process of verifying your product data quality to safeguard your manufacturing quality.



### **PDQ Verification**

With more than 40 years of experience and industry-proven technologies, 3D-SUITE can identify defects in geometry and topology. Over 70 check items are available.



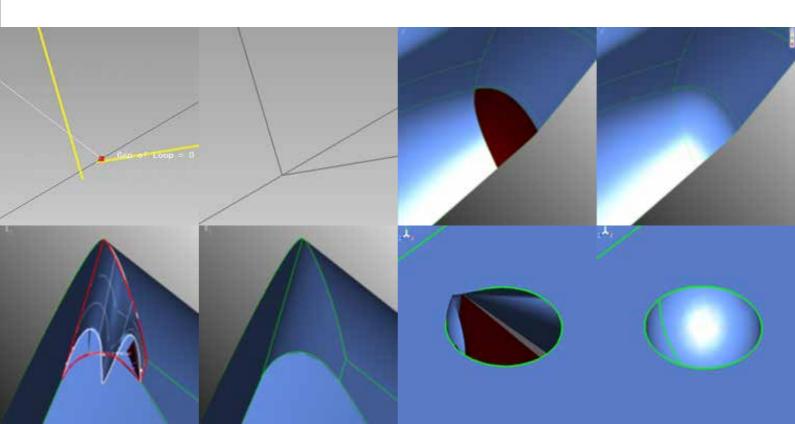
### Healing

The state-of-the-art healing technologies allow you to repair your 3D models and automate the process of quality assurance.



### Report

Results of PDQ checks can be exported as shareable 3D reports.
Our 3D PDF PDQ reports allow you to document and archive your findings, while maintaining 3D content.





### Customer Requirements / Industry Standard Support

### ISO / SASIG PDQ **Guidelines**

SASIG (Strategic Automotive product data Standard Industry Group) defined a common set of guidelines for product data quality for the global automotive industry. Elysium, as a member of the standardization committee, was involved in the development of the guideline.

### PDQ Critera for **Nissan & Suppliers**

Nissan and its suppliers are building a strict PDQ management system by using Elysium's solutions which enables validation of 26 critical check items including 16 of the most important items which comply with the SASIG PDQ guideline.

### **Boeing** D6-51991

Elysium's technology supports the Boeing D6-51991 quality standard for suppliers to ensure data can be translated and validated.

### 🔙 LOTAR

### **Standard**

LOTAR is an international consortium of Aerospace manufacturers, jointly facilitated by AIA, ASD-Stan, AFNeT, prostep ivip and PDES, Inc. to create and deploy the standards for long-term archiving and retrieval of digital data. Elysium is an official Solution & Service Provider for the LOTAR Organization.



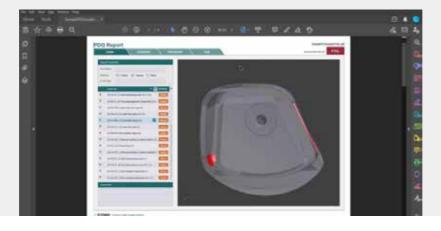
### Support Mil-STD-31000,

### **US Military Standard**

Elysium was involved in the definition of the product data quality criteria in MIL-STD-31000, DEPARTMENT OF **DEFENSE** TECHNICAL STANDARD PRACTICE: DATA PACKAGES (26-FEB-2013). This standard provides requirements for the deliverable data products associated with Technical Data Packages (TDP) and its related TDP data management products.

### PDQ Report in a Sharable 3D PDF

3D-SUITE's report creation enables easy viewing and sharing of PDQ check results.



- **Instant Error Detection**
- Error Severity Identification
- **Simple Error Navigation**











### Based on Math, Not Guesses

CAD systems have differences. To move from one to another you need to understand these differences. 3D-SUITE breaks down each model to its basic mathematical representation to precisely convert into another mathematical definition.



### **Utilizing CAD APIs**

High-quality translation based on our unique conversion formula utilizing the official APIs of CAD systems



### More than just Geometry

Accurate geometry with original CAD colors, 3D annotations, attributes, assembly tree(s), layers/groups, views/captures, and quality stamping

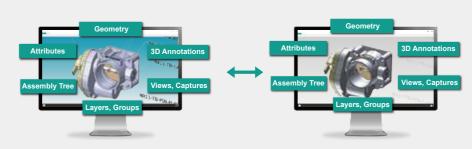


### Schedule & Automate

Schedule translations per your convenience and automate with triggers with your PLM system

# The Power Behind Translation

3D-SUITE translation offers more than what meets the eye. With the utilization of genuine CAD APIs, information within the 3D CAD data including geometry, PMI, attributes, and more, are all delivered to your target system with high fidelity.



Original CAD System

Target CAD System



### Supported CAD and Formats

Elysium offers support for all major CAD systems and a multitude of other formats.

CAD	Туре	Importer			Exporter		
		Geometry	Attribute	PMI	Geometry	Attribute	PMI
2ATIA V/5	Plug-in	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>✓</b>	✓	<b>✓</b>
CATIA V5	Standalone	<b>✓</b>			<b>✓</b>		
CATIA V4	Standalone	<b>✓</b>			<b>✓</b>		
BDEXPERIENCE	Plug-in	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>✓</b>		<b>√</b>
NX	Plug-in	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>✓</b>	✓	<b>√</b>
	Standalone	✓			n/a	n/a	n/a
Creo Parametric	Plug-in	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>✓</b>	✓	
Creo Parametric	Standalone	<b>✓</b>			n/a	n/a	n/a
NX I-deas	Plug-in	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>√</b>	✓	<b>√</b>
SOLIDWORKS	Plug-in	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>✓</b>	<b>√</b>	<b>√</b>
Creo Elements/Direct	Plug-in	<b>✓</b>			<b>√</b>		
Autodesk Inventor	Plug-in	<b>✓</b>	<b>✓</b>		<b>✓</b>	<b>√</b>	
Solid Edge	Plug-in	<b>✓</b>	<b>✓</b>		n/a	n/a	
CADmeister	Standalone	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
CAD	Standalone	<b>✓</b>			<b>✓</b>		
Parasolid	Standalone	<b>✓</b>			<b>✓</b>		
ACIS	Standalone	<b>✓</b>			<b>✓</b>		
STEP	Standalone	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓	<b>√</b>
JT	Standalone	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>
PLM XML	Standalone	<b>✓</b>	<b>✓</b>		<b>✓</b>	✓	
XPDMXML	Standalone	<b>√</b>	<b>✓</b>		<b>✓</b>	✓	
3D PDF	Standalone	✓		<b>√</b>	<b>✓</b>		<b>√</b>
Creo View	Standalone	n/a	n/a	n/a	<b>✓</b>		
3DXML	Standalone	<b>✓</b>			n/a	n/a	n/a
QIF	Standalone	<b>✓</b>		<b>✓</b>	<b>✓</b>		<b>√</b>
GES	Standalone	<b>✓</b>			<b>✓</b>		
STEP XML	Standalone	<b>✓</b>	<b>✓</b>		<b>√</b>	<b>✓</b>	
STL	Standalone	<b>✓</b>			<b>✓</b>		
XVL	Standalone	n/a	n/a	n/a	<b>✓</b>	<b>✓</b>	<b>√</b>
OBJ	Standalone	<b>√</b>			<b>✓</b>		
VRML	Standalone	<b>✓</b>			<b>√</b>		
Nastran	Standalone	<b>√</b>			n/a	n/a	n/a
Point Cloud	Standalone	<b>√</b>			<b>√</b>		







### PMI Checker

### PMI Quality Verification for Model-Based Workflows

PMI Checker automatically validates PMI integrity to improve CAD data quality and streamline MBD/MBE workflows, supporting accuracy, compliance, and efficiency across enterprise processes

### Why PMI Verification

# Eliminate Ambiguity before Release

Ensure PMI is accurate, consistent, and standards-compliant at the source, preventing costly miscommunication and downstream errors.

### Reduce Late Engineering Changes

Catch PMI issues upstream and prevent expensive rework, delays, and disruptions after release.

### Enable True MBE Reuse

Provide trusted PMI that flows seamlessly across engineering, manufacturing, quality, and supply chain domains to unlock enterprise-wide reuse.

### Key Features of PMI Checker



### Broad Format Support

One Interface for All Formats
Validate both native CAD models and
neutral standards such as STEP and QIF in
a single, unified interface. This ensures
consistent workflows across multiple CAD
systems and supplier data, reducing rework
and eliminating inefficiencies from
switching between tools or formats.



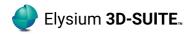
# Rich Set of Verification Criteria

30+ Checks Aligned with ISO/ASME
Ensure PMI accuracy with a comprehensive
library of verification criteria based on ISO
and ASME standards. Beyond standards
compliance, PMI Checker detects potential
issues in PMI usage and works alongside
CAD's PMI authoring tools to deliver a more
robust quality assurance process. Support
for company-specific custom checks is
planned.

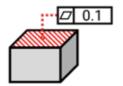


# Flexible Output Options

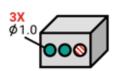
Results Tailored for Every Stakeholder
Review results directly in CAD or in
3D-SUITE Viewer with Inspector,
organized by PMI, presentation state, or
check criteria. Export interactive 3D PDF
reports for easy sharing with non-CAD
stakeholders, and extend integration
with enterprise systems through HTML
or machine-readable formats. Support
for HTML and machine-readable outputs
is planned.



### **Examples of Built-in Check Criteria**



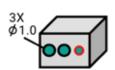
No Surface Associated



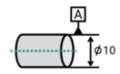
Inconsistent Quantity between Annotation Value and Target Features



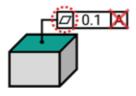
Incorrect Use of Circular or Spherical Symbol for Dimension



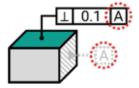
Nominal Value Mismatch within Pattern



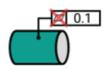
Ambiguous Location of Datum Feature Indicator



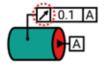
Inappropriate Use or Missing Datum Reference for Geometric Tolerance



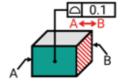
Undefined Datum Reference



Incorrect Relation of Geometric Tolerance and Feature



Incorrect Relation of Datum Feature and Tolerance Type



Inconsistent Feature for Range Symbol

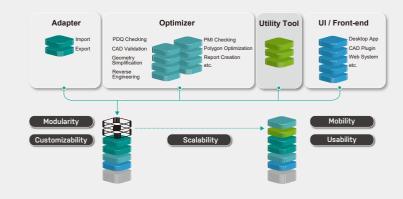
### Other Check Criteria

- PMI Associated with Edge Only
- PMI Associated with Vertex Only
- PMI Unassigned to a Presentation State
- Inconsistent Feature across Attached PMI
- Same Annotation in Multiple Presentation States
- Inconsistent Length between Annotation Value and Shape
- Inconsistent Angle between Annotation Value and Shape
- Tolerance Value Greater than Dimension Nominal
- Untoleranced Dimension
- Tolerance Dimension without Association with Feature of Size
- Nominal Value Mismatch by Rounding

- Invalid Datum Label
- Duplicated Datum
- Datum Feature Indicator without Triangle Marker
- Insufficiently Constrained Datum System
- Incorrect Relation of Geometric Tolerance Modifier and Feature
- Incorrect Use of Zone Shape Symbol for Geometric Tolerance
- Zero-value Geometric Tolerance without Modifier
- Inconsistent Tolerance Value across Attached Feature Control
   Frames
- Incorrect Datum Relationship for Orientation Geometric Tolerances etc.

# Combine with Other 3D-SUITE Functionalities

Build an optimized end-to-end process by combining PMI Checker with Elysium's other solutions—data translation, geometry assessment for design for X, CAD validation, and more. Together, they enable smooth and reliable data exchange from the design to all across downstream stakeholders.









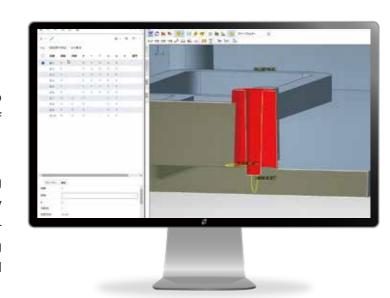


# DFM Solution | DFX Analyzer Automatic Manufacturability Assessment System DFX Analyzer Plug-in for DFM is a solution to auto-evaluate the quality of your design in terms of manufacturability, machinability, and moldability based on the design CAD models.

# Fix Potential Manufacturability Issues in Early Design Phase

It is almost impossible for even experienced engineers to design optimally considering the full manufacturability of the product.

DFX Analyzer Plug-in for DFM aids design engineers during the design process by detecting potential manufacturability issues through geometry feature analysis. This helps eliminate the risk of spending hours or even days on engineering changes to fix issues raised by production engineers, and cause a delay on the entire production lead-time.





### Automatic Evaluation to Save Engineers' Time

Release design engineers from tedious, human eye manufacturability checks to facilitate value-added creative work.



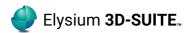
### Eliminate Rework to Shorten Lead-time

Minimize the risk of rework after dispatching the data to post processes, reducing lead-time.



# Cost Reduction through Standardization

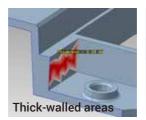
Reduce the manufacturing costs by avoiding complex tooling, standardizing the hole diameter, etc.

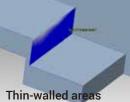


### **Pre-set Check Criteria**

### For Plastic (Resin) Part

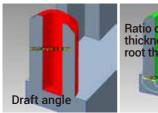
### **Wall Thickness of Product**





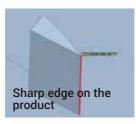
### Boss / Rib

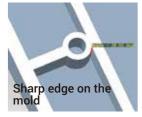






### **Sharp Edge**



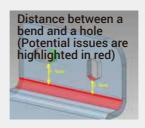


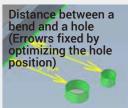
### **Other Check Criteria**

- Undercuts
- Tiny fillets (R)
- Thin parts (Mold)
- Holes

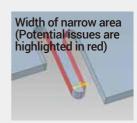
### **For Sheet Metal**

### **Distance between Bend and Hole**





### Width of Narrow Area



### Other Check Criteria

- Bosses
- Burring
- Holes
- Half-punching
- Engraving

- Dowels
- Bridges
- Overhangs
- Bends / Flanges / Hemings









# DFA Solution | DFX Analyzer Automated Verification of Assembly Feasibility

### Is Your Assembly Design Silently Driving up Costs?

- Struggling with repeated rework and persistent quality issues during assembly?
- Facing rising costs not only in assembly but also in downstream processes such as maintenance and service after shipment?

### The Root Causes Often Go Unnoticed

# Geometry changes introduce hidden defects

 e.g., a shifted hole position leads to misalignment with fasteners

# Layout adjustments trigger new interferences

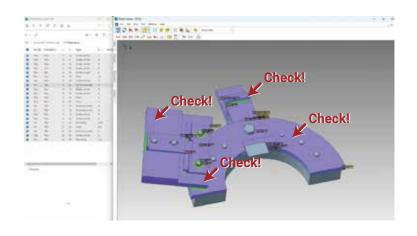
 e.g., repositioning a component results in collisions or insufficient clearance

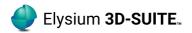
# Designs overlook real-world assembly constraints

 e.g., obstructions block assembly paths, making it hard for workers or robots to assemble or disassemble

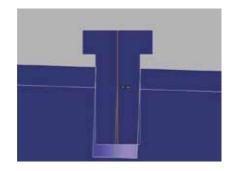
# Automated Assembly and Disassembly Verification Using Elysium's Geometry Handling Technology

Most manufacturing costs are determined in the early design stage. By enabling accurate assembly verification for all designers—regardless of experience—you can minimize costly rework in downstream processes and avoid high maintenance costs after release.

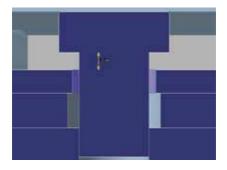




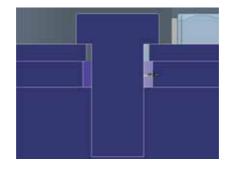
# **Examples of Assembly Verification**



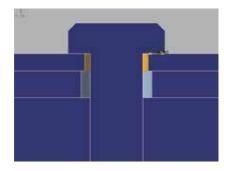
Axis Misalignment



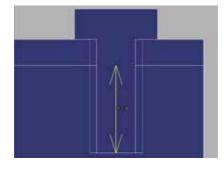
Underdriving



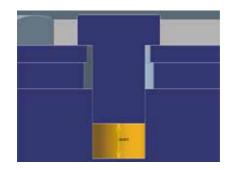
Through-hole Clearance



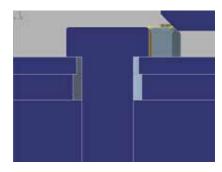
Head Engagement Length



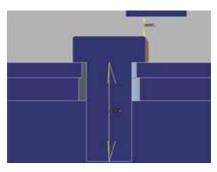
Axis Engagement Depth



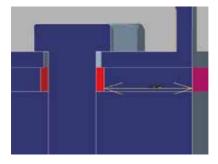
Tip Clearance



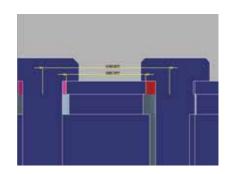
**Head Clearance** 



Insertion Clearance



Through-hole Wall Thickness



Distance to Adjacent Hole









# Safety Regulation Compliant Software for Automobile Projection Check DFX Analyzer

Assuring Automotive Safety through Automated Thorough Inspection

Thorough inspection of 3D CAD data to check for protrusions and follow international regulations

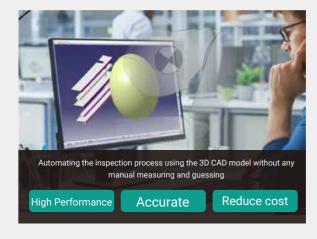
### Streamlining Your Automotive Safety Regulation Checking Workflow

**Conventional Process** 





### **Automated Digitalization**



### **Industry Proven**

Industry leading automotive suppliers have proven the potential

### 14 hours → 1 hour

Automate your process and reduce checking time and cost.

Prevent result quality mismatch between engineers.

### **Zero Omission**

User friendly interface and reporting to allow zero tolerance for oversight.

# Prevent Loss in the Millions

Eliminate the risk of rework and financial loss in the millions by checking in the upstream process.

### Why DFX Analyzer?

### High-performance Geometry Handling

Over 40 years of geometry handling expertise ensuring accuracy and high performance inspection.

### Intuitive Result Viewing

Confirm the result with ease by taking advantage of a highlighted 3D model and a filterable list. Create a section at the contact point automatically as well

### Flexible Customization

Looking for an inspection for your own rules? DFX Analyzer can be customized to meet internal regulations and qualified conditions.





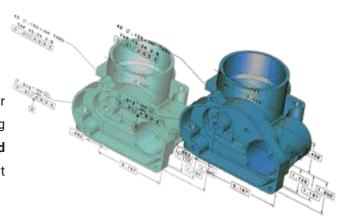
# **CAD** Validation

CAD data can be complex. Comparing two CAD models is just about impossible for a person to do.

3D-SUITE offers an easy way to compare CAD models with 3D PDF, HTML, and XML validation reports.

# Comparing 3D Data is now easier than ever before

With the industry becoming more and more reliant on 3D data for collaboration and manufacturing, it is essential that the data being shared is accurate. **Comparing CAD model geometry, PMI and attributes** can be frustrating and exhausting, but 3D-SUITE makes it simple and quick.





# Accurate reports with the information that matters

3D-SUITE automatically creates reports for your validation results as 3D PDF or HTML. You can utilize triggers to generate reports and customize content to establish clear communication for each use case.

# Capabilities

# Compare Assemblies & Parts

Compare at the part level, the assembly level or both.

### Integrate into your PLM

Use XML and your PLM system to automatically execute model validation. Implement triggers that can notify you of PASS/FAIL statuses. 3D PDF and HTML reports can automatically be generated and added to your PLM system.

### 3D Data Sharing

Changes/difference information can be shared easily through common formats such as 3D PDF, HTML, and XML.



### **Use Cases**

### **ENGINEERING CHANGE**

### Rev. A $\stackrel{\longrightarrow}{\subset}$ Rev. B

Finding differences in an engineering drawing can be frustrating and time-consuming. That is why 3D-SUITE is designed to make the change identification process quicker and easier. Instantly see changes in parts and assemblies to see where the changes occurred in geometry, PMI, and attributes, and confirm only what was meant to be changed has changed.





### **DATA DELIVERY**

### **Authoritative = Derivative**

3D data is shared constantly and with 3D-SUITE you're assured that what you share matches the original. Ensure that Geometry, PMI, and Attributes are maintained no matter the delivery format; CAD to CAD, CAD to STEP, etc.

### **VERSION TO VERSION CHECK**

### CAD x.0 = CAD x.1

Most people would assume that you would get the exact same CAD data when upgrading to the latest CAD version, but often we see that even incremental releases have differences from one another. 3D-SUITE is designed to detect the most subtle difference so that you can be confident that you are getting the exact same model.





### **LOTAR ACCURACY CHECK**

### **CAD** = Archival Format

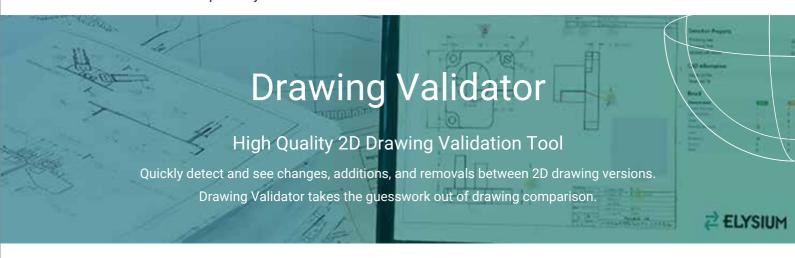
Many aerospace companies are looking for solutions that can check data accuracy before archival. With 3D-SUITE you can check your current CAD model against an archival model (typically STEP) and compare the results. When transferring the model to an archival, you can add the 3D PDF or HTML validation report to show that the model does match the original.











### **Detect & Compare Drawings**



# Semantic Validation

Compare based on semantic values extracted from the source CAD model using official CAD API.

Ignore redundant differences such as the position of BOM table, PMI etc.



# Flexible Customization

Tune up for your needs to detect significant changes only.

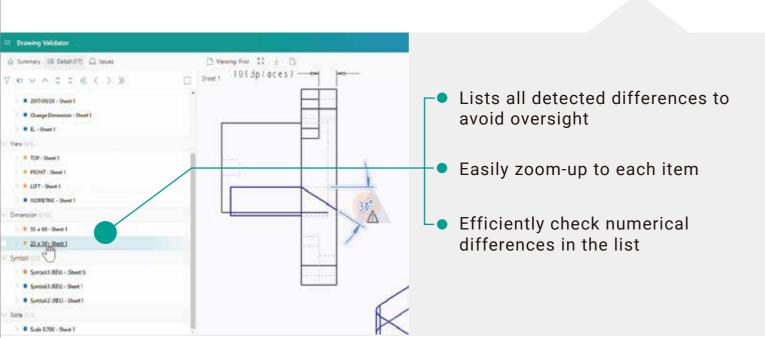
Support batch processing to automate the process.



### User-friendly Report

Viewable via Web browser.

Highlights the changes by animation and semantic values categorized by element type.

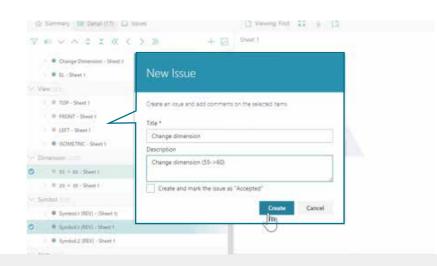




### Pick Up

### **Comment Function**

Enabled to add comments on the detected differences and smoothly communicate information to the post processes.



# Realize Seamless Downstream Communication through Automated Drawing Validation

Downstream Processes



### **Customer's Voice**



Mr. Kazuhiko Fukuoka

Senior Assistant Manager of Erection Engineering Group, Plant Engineering Department, Power System Plants Business Division of IHI Power Systems Co., Ltd.

## It is a game changer.

Drawing Validator dramatically reduces the lead time and increases the efficiency in our 2D drawing check process, especially when working on large assembly models as it detects differences on the number of elements, values of dimensions and annotations based on parametric values in Creo Parametric native data.

Our conventional method with an image comparison tool—check for differences by overlaying two drawings—always required manual filtering and examination by human eyes as the comparison result contained redundant differences such as slight change in the layout position of detail drawings, and such differences were reported as a difference in the whole detail drawing which was hard to understand what had been changed and judge whether important or not. In the scene where the detection of unintended changes is also integral, it is fundamental that only, but all the significant differences are detected.

We see a great potential in this new product that this will enhance not limited to the 2D drawing validation process, but across the entire manufacturing process.





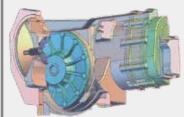


# Simplification & Solid Enveloping

Not everyone needs a fully detailed model. Simplify for FEA, space claim, light-weighting and intellectual property protection.

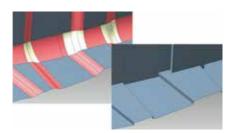
### Sometimes less is more





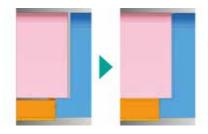
3D CAD models are a great design communication tool, but sometimes fully detailed models are huge in size making downstream processing quite inefficient. Simplifying 3D data by enveloping or removing features such as fillets, chamfers, holes, ribs, bosses, and more can reduce data size dramatically, making data consumption, especially in CAE analysis, straightforward.

### **Key Features**



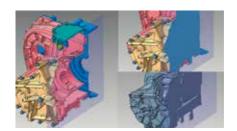
# Recognizing and Removing Features

Recognize and easily remove geometric features such as fillets and chamfers without the CAD feature tree information.



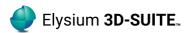
### Filling Gaps between Parts

Detect and fill in minute gaps between parts in the assembly model that cannot be confirmed by the human eye.



# Extraction of Envelope Solid and Inner Void

Create a single lightweight solid with only the outer geometry or extract inner voids automatically from the assembly models.

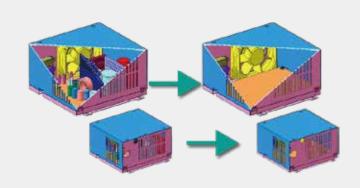


### **Use Cases**

### **IP PROTECTION**

# Your model is your intellectual property

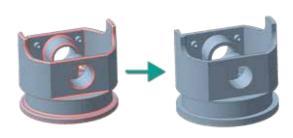
If a model needs to be shared with customers or suppliers, 3DxSUITE's simplification solution allows you to only share what needs to be shared. Quickly remove proprietary information with confidence.



### **CAE ANALYSIS**

# CAE made simple

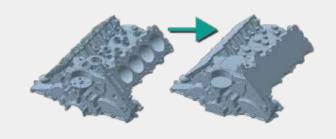
Improve model optimization for computer aided engineering analysis. Whether its Computational Fluid Dynamics (CFD) or structural analysis, 3DxSUITE's simplification tools are quick and effortless to get the right model for your analysis needs.



### **SHRINK WRAPPING**

### Your model in a nutshell

Simply share the outer representation of your 3D model. Only providing the crucial details without a heavy-weighted model or exposure of intellectual property.











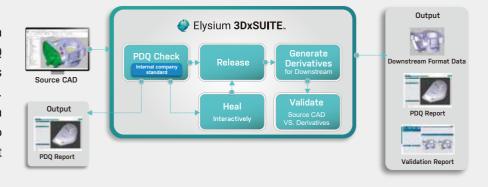
# Use Cases

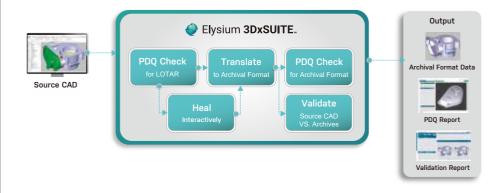
### Accelerate MBD/MBE



### Manufacturing

Elysium 3DxSUITE supports the full data delivery process to manufacturing. PDQ checking based on company standards assures high quality data from the start. Precise translations and robust data package creation enables manufacturing to receive the right information in the right format every time.



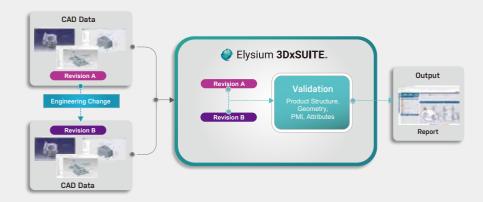


# LOTAR (Long-Term Archival and Retrieval)

Need to archive data? Elysium 3DxSUITE provides PDQ checking based on LOTAR criteria, accurately translates to your LOTAR format of choice, and validates the translated data so you can trust what you archive.

### **Engineering Change Management**

A typical challenge is communicating engineering changes, especially for model-based data within a systematic process. 3DxSUITE supports automatically triggered engineering change notifications with changes highlighted right within the 3D model. 3DxSUITE's optimizer CAD Validator will automatically detect and report changes so you always have the latest information.







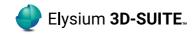


# Bundle Packages

Start your model-based journey based on our best-practices. For common use cases we offer preconfigured Bundle Packages.

### Standard

	CADdoctor Standard Package A package for basic PDQ checking & healing	CADdoctor Trans Package A package for standard formats translations + PDQ checking & healing	CADdoctor FEM Package All in one package for FEA analysis	CADdoctor RE Package  All in one package for reverse engineering & polygon data handling
Adapter (Importer)	IGES	IGES STEP	IGES STEP Polygon/Point Cloud	IGES STEP Polygon/Point Cloud
Adapter (Exporter)	IGES STL	IGES STEP STL	IGES STEP Polygon/Point Cloud	IGES STEP Polygon/Point Cloud
Optimizer	PDQ Checker	PDQ Checker CAD Validator	PDQ Checker  CAD Validator  Geometry Simplifier  Mid Surfacer  Polygon Optimizer	PDQ Checker  CAD Validator  Reverse Engineer  Polygon Optimizer
Front-end	Editor	Editor	Editor	Editor



### Standard

	Daimler CATIA V5 to/from JT Package  CATIA V5-JT (Bi-directional) package for Daimler suppliers	Daimler CATIA V5 to  JT Package  CATIA V5 to JT (mono-directional)  package for Daimler suppliers	Daimler JT to CATIA  V5 Package  JT to CATIA V5 (mono-directional)  package for Daimler suppliers
Adapter (Importer)	CATIA V5 CATIA V4 JT STEP BOM PLM XML	CATIA V5 CATIA V4	JT STEP BOM PLM XML
Adapter (Exporter)	CATIA V5 CATIA V5 PMI Option JT JT PMI Option STEP BOM PLM XML	JT JT PMI Option STEP BOM PLM XML	CATIA V5 CATIA V5 PMI Option
Optimizer	ENF Editor	ENF Editor	ENF Editor

### Enterprise

Entorne	se Starter	Dookogo
	se starter	Fackage

A "Starter" package of our

	enterprise solutions.
Adapter (Importer)	Any CAD
Adapter (Exporter)	Any CAD Any CAD PMI Option
Optimizer	ENF Editor
Front-end	SmartController Pro







# License Type

There are two types of licenses to leverage 3D-SUITE Adapters,
Optimizers, and Front-ends.

### Standard

- Multiple Front-Ends for desktop applications
- Integration into CAD systems via Plug-ins
- Scenario utilization to increase reuse
- Easy execution of sophisticated capabilities
- Manual operations by users
- Limited batch functionality

### **Enterprise**

- Multiple Front-Ends from desktop applications to fully automated enterprise solutions
- Scenario utilization to increase reuse
- Full batch functionality with load balancing and command line
- PDM integration and web-based systems
- Scalability

	Standard	Enterprise
Desktop applications	x	x
Interactive execution	x	х
CAD system integration	X	х
Scenario utilization	X	х
Simple Batch processing	x	x
Full Batch Functions (Load Balancing, Command Line)		x
PDM integration		x
Automation for high throughput		х



