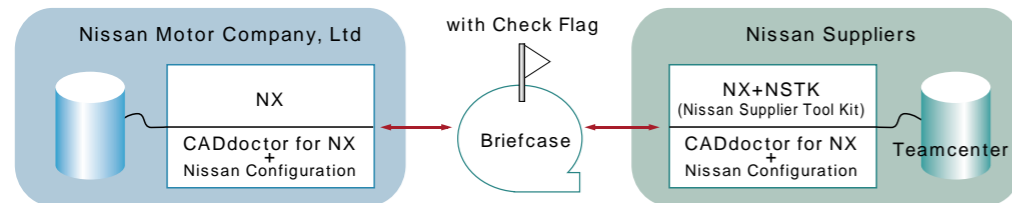


## Fulfilling PDQ Requirements of Nissan Motor Company and all of its NX corporate users

### For Nissan and Its Suppliers

Nissan Motor Company Ltd. (Nissan) uses Siemens NX as its global CAD standard, and its PDQ requirements demand a unique checklist system to manage 3D data transmission between the company and its suppliers. To implement the PDQ compliance properly, this checklist system requires a Briefcase format to which both parties must supply 3D CAD and data to each other. CADdoctor for NX enables both the automaker and those who work with them to validate and secure the quality of all sent and received CAD data. CADdoctor for NX checks 3D data directly from within Siemens NX in accordance with Nissan's strict specifications. CAD data with no error detected by NXdoctor will be promptly accepted by the Briefcase. Suppliers are provided with an NX-based Nissan Supplier Tool Kit (NSTK)\* to further assist in data preparation for the Briefcase. All CAD data entering a Briefcase must be authenticated in conformity with Nissan's strict quality specifications. Accepted data are marked with a check flag in the Briefcase, while rejected data are not. Nissan will only receive CAD data which has received the check flag, while rejected data must be repaired by the supplier and resubmitted for authentication.

Elysium's CADdoctor for NX, developed through long-term and close collaboration with Nissan, is perfectly suited to meet Nissan's PDQ criteria through the data delivery system including NSTK and Briefcase. As CADdoctor for NX has proven its value to Nissan, it will be a vital tool for every supplier in the future.



(\*) For more information about NSTK, please contact Siemens PLM Software Inc.  
(\*\*) For more information about the configuration file exclusively for Nissan, please contact Elysium or our authorized distributor in your area.

### PDQ Needs for Any Manufacturer

Elysium's flexible architecture for PDQ checking can be readily modified to meet the specific PDQ requirements of any manufacturer. To secure the product data quality among suppliers or divisions, it is recommended to apply specific configuration files to suit each situation of product development, including CAD systems and the type of final product. To strictly enforce PDQ control, the leading company should lock validation items and thresholds at predefined values. If authentication keys such as Check Flag are needed, Elysium can also provide the configuration file with the function to acknowledge validity. If you are interested in creating an exclusive configuration file for your company's needs, please do not hesitate to consult our authorized distributor.

### Hardware Requirements

Please refer to the Elysium global web for the compliant NX version and hardware requirements.

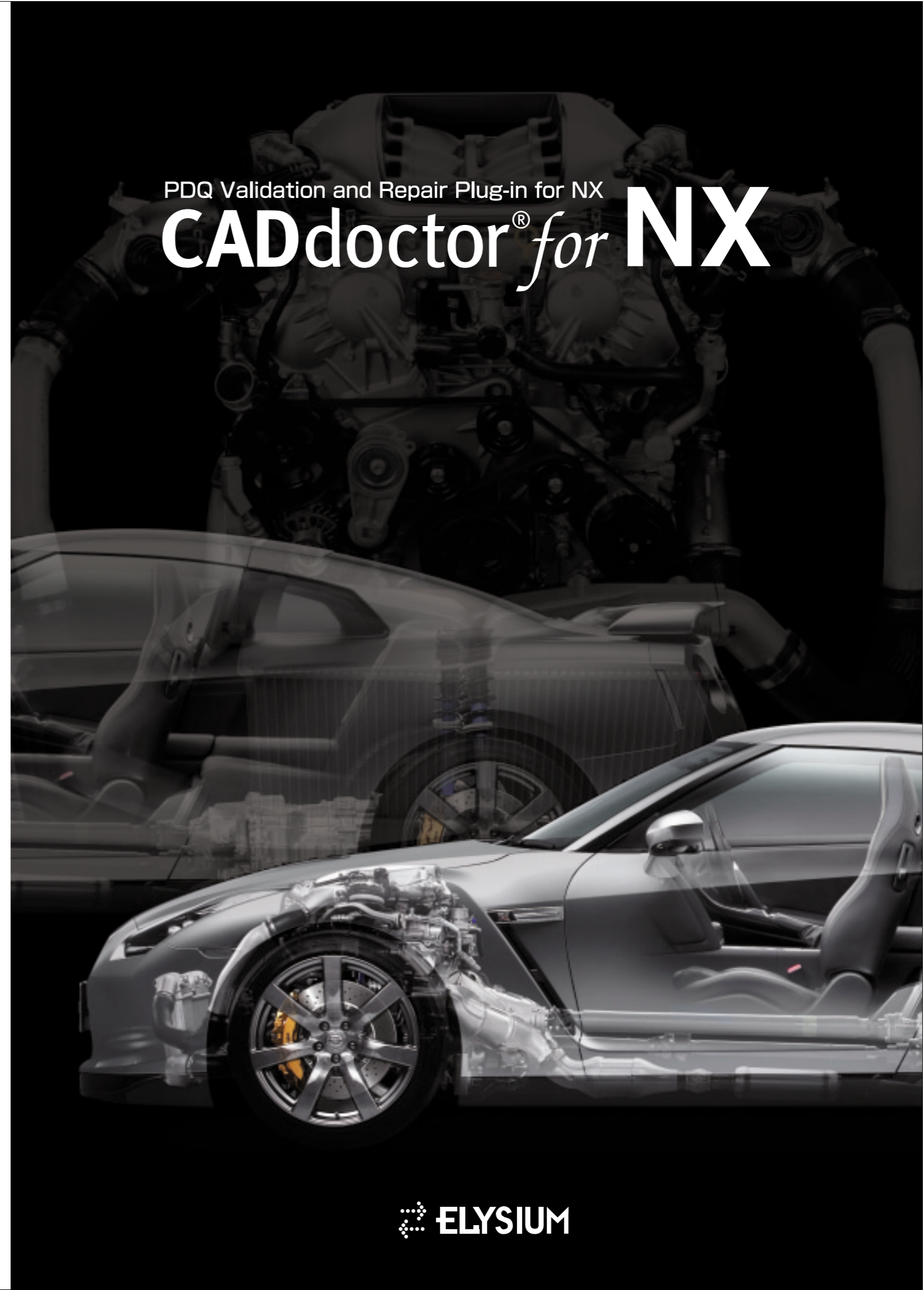
<http://www.elysium-global.com>

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\*CADdoctor is a registered trademark of Elysium Co., Ltd.



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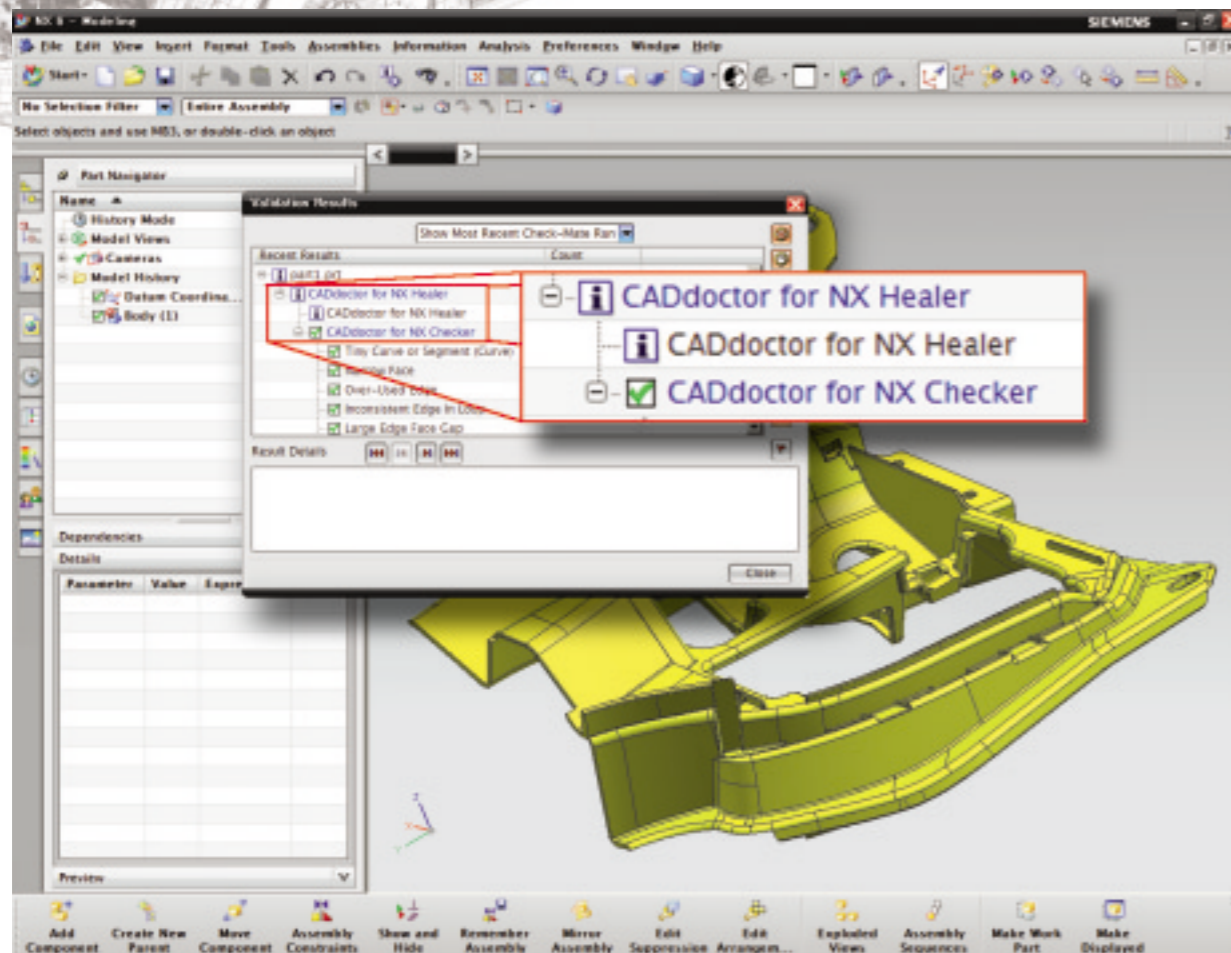


# PDQ Validation and Repair Plug-in for NX

## High-Fidelity **PDQ** Verification

CADdoctor for NX allows users to validate and repair 3D CAD data from within Siemens NX.

Implementing CADdoctor for NX early in the design phase will help NX users at any level improve efficiency throughout the manufacturing enterprise. Because data quality reverberates all the way down the supply chain, the assurance of accurate, validated CAD data profoundly affects every stage of product lifecycle management (PLM).



### PDQ Validation

NX users can operate PDQ validation using Check-Mate. Based on Elysium's years of experience, and in light of NX's specialties, CADdoctor for NX ensures reliable PDQ validation. It allows users to validate 27 critical check items including 20 most important items which comply with SASIG.

27 critical check items including  
 20 most important items which comply with SASIG, VDA and JAMA/JAPIA

- 1 Large curve gap
- 2 Non-tangent segments
- 3 Tiny curve or segment (curve)
- 4 Tiny curve or segment (segment)
- 5 Self-intersecting curve
- 6 Embedded curves
- 7 Non-tangent patches
- 8 Tiny surface or patch (surface)
- 9 Tiny surface or patch (patch)
- 10 Narrow surface or patch (surface)
- 11 Narrow surface or patch (patch)
- 12 Degenerate surface boundary (surface)
- 13 Degenerate surface boundary (patch)
- 14 Self-intersecting surface
- 15 Embedded surfaces
- 16 Folded surface
- 17 Tiny edge
- 18 Large edge gap
- 19 Self-intersecting loop
- 20 Inconsistent edge in loop
- 21 Large edge face gap
- 22 Tiny face
- 23 Narrow face
- 24 Embedded face
- 25 Large face gap
- 26 Over-used edge
- 27 Tiny solid

\*Items in blue will be available with version 2.0.

### Healing

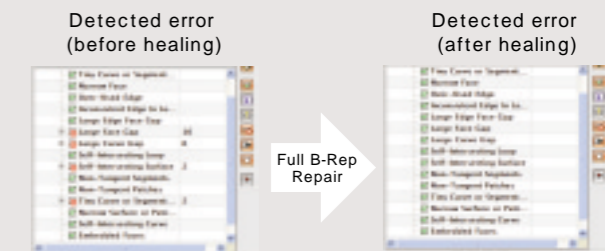
Elysium's accumulated CAD data healing technology enables automatic regeneration of perfect NX data. CADdoctor for NX provides functions to not simply remove errors, but to thoroughly review and repair the geometry so that the CAD data can be utilized in the next stage in the CAD data flow.

### Full B-rep Repair

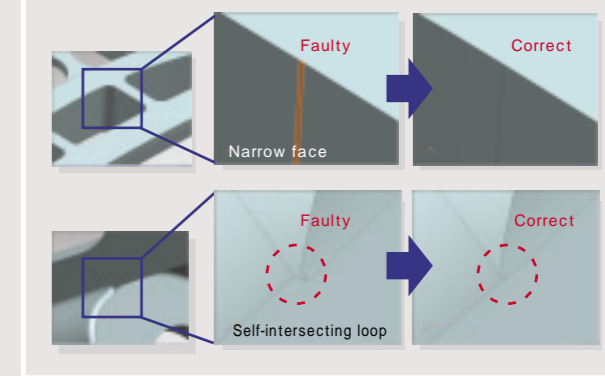
Automatic healing of the entire model. A repaired model will be added as a separate volume to the original file. The original model will be suppressed or removed after healing.

### Repair with History

PMI and attribute information is stored, and only entities with PDQ errors are repaired.



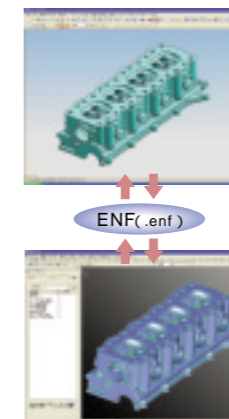
### Usage example of CADdoctor for NX



\*Repair with History\* will be available with Version 2.

### Compatibility with Elysium family of products

CADdoctor for NX is capable of file level compatibility with Elysium family of products which include CADdoctor, a full functionally 3D geometry healing and modification tool, and ASFALIS, for automated CAD conversion.



\*To use CADdoctor and/or ASFALIS, please have them/it ready.

### Assist I-deas NX to NX Migration

I-deas allows only one fixed tolerance per model. However NX has a tolerant modeling function which allows users to set varying tolerances within one model. These different methods of handling tolerances can cause problems with PDQ issues when migrating I-deas NX data to NX by the standard conversion tool. CADdoctor for NX can easily identify issues caused by tolerance differences and greatly reduces the time to create a perfect model that passes PDQ checks.

