

CAD Data Quality for Nissan and its Suppliers

Elysium, in partnership with Nissan Motor Co., Ltd. and iSiD Co. Ltd., have developed Product Data Quality Nissan Package or PDQ NP. PDQ NP is an I-deas NX plug-in that provides instant CAD model checking, healing and certification. Effective in 2004, Nissan will require its subsidiaries and suppliers to provide a PDQ NP guaranteed file in order to send or receive CAD model files.

The PDQ NP certification is based on Nissan official CAD Quality Guidelines.

PDQ NP is the first CAD Data Quality product that not only checks for topology, geometry and manufacturability, but provides a robust tool set for automatic healing and applies a guarantee that the inspected part meets the requirements all within the I-deas NX CAD system.

Elysium's experience with I-deas NX and CAD related geometry and topology issues, allowed for rapid integration of our Data Exchange Kernel's Healing Module into PDQ NP.

Key Features

- ❖ **Diagnosis**
 - Ability to check data based on Nissan product quality guidelines for CAD models.
 - Integration with TDM provides the ability to manage check vs. uncheck entities, query items in libraries and package files, while providing instant time productivity during the life cycle of product development.
- ❖ **Automatic Repair**

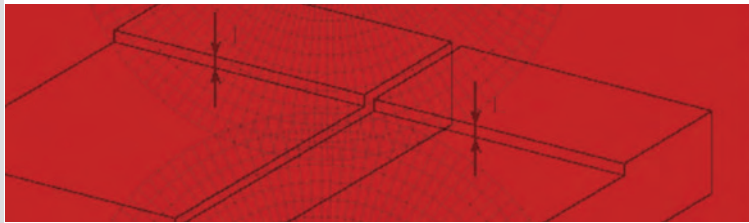
The Partial Repair enables the automatic healing of CAD models based on Elysium's Advanced Data Exchange Healing Kernel (ADEK). ADEK does not require any user intervention as the healing parameters are tuned to meet Nissan's stringent CAD Quality Guideline requirement. This auto-repair fixes most common issues and retains the design history of the part.
- ❖ **Full Repair**

In those situations where additional issues are found, a more complete repair can be done automatically by operating on the Brep of the part.
- ❖ **Data Check Guarantee**

PDQ NP tracks the check/heal status of each entity within a given model file. Once an item has been guaranteed, the tracking system skips all guaranteed entities during subsequent check/heal routines.

Product developed by:

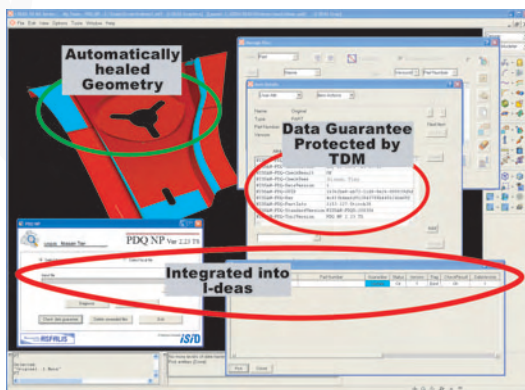
IT Solution Innovator **iSiD**



PDQ NP Error Classification

PDQ NP identifies and heals the 15 critical errors identified in the Nissan Quality Guidelines. These lead to improved manufacturing and consistent quality of geometry provided to Nissan.

- ❖ Tiny Edge
- ❖ Narrow Edge
- ❖ Sharp Edge Angle
- ❖ Inconsistent Edge in Loop
- ❖ Large Edge Face Gap
- ❖ Large Face Gap
- ❖ Large Edge Gap
- ❖ Self-Intersecting Loop
- ❖ Self Intersecting surface
- ❖ Non-Smooth Segments
- ❖ Non-Smooth Patches
- ❖ Tiny Curve or Segment
- ❖ Narrow Surface or Patch
- ❖ Self-Intersecting Curve
- ❖ Embedded Faces



About Elysium Inc.

Founded in 1984, Elysium bridges the gap between CAD systems and enables PDM and product structure synchronization with its industry leading technologies. Elysium's CADporter™, CADdoctor™, CADpdm™ and CADserver™ software products enable the translation of all geometry from one CAD system to another with the industry's highest success rate. Platforms supported include ACIS, CATIA, I-deas, Inventor, ParaSolid, Pro/ENGINEER, SolidEdge, Solidworks and UG NX. Elysium has successful partnerships with all major CAD / CAM / CAE and MCADsoftware companies including Abaqus, Autodesk, CoCreate, Dassault, Maya Metrix, PTC, Spatial Corporation and UGS PLM Solutions. Elysium is a member of the AIAG and is a sponsor of the Renault F-1 race team.

For additional information about Elysium's products and services, please visit www.elysiuminc.com.

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