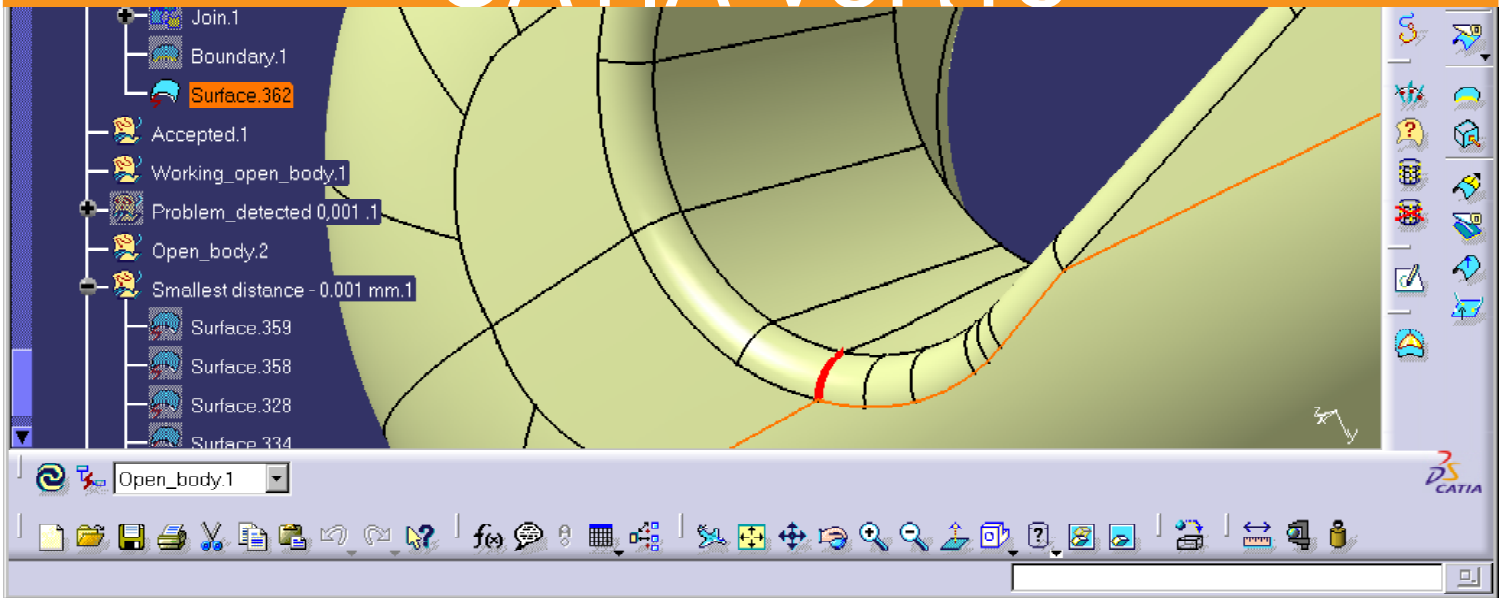


Mechanical Design

CATIA - Healing Assistant 1 (HA1)

CATIA V5R18





Mechanical Design

CATIA - Healing Assistant

Check the validity of imported geometry with regard to CATIA V5 modeling criteria and if necessary improve the topology and geometry of analyzed objects

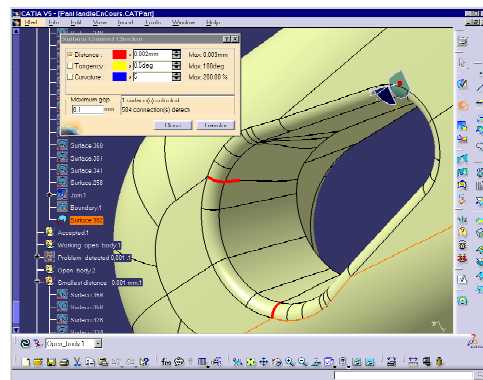
Product overview

CATIA - Healing Assistant 1 (HA1) product provides users reconciliation and fixing tools to heal parts to be used in downstream applications such as manufacturing, analysis or tooling design. This product helps user checking validity of imported data (surfaces or solids) with regard to V5 modeling criteria, then correcting or improving the topology and the geometry of the analyzed objects.

CATIA - Healing Assistant 1 (HA1) is perfectly suited for designers who have to deal with complex parts from various CAD applications and formats. This product allows them to make their Parts "V5 compliant" to be able to reuse components in any V5 applications. The mold and die tooling process is particularly impacted by these advanced capabilities, as tooling is often done by sub-contractors receiving data exported by their OEMs in standard formats such as IGES or STEP. But Healing Assistant is also very useful for data migration, i.e. for companies who need to migrate data from their previous CAD (including CATIA V4) to their new CATIA V5 environment.

Product Highlights

- ☒ Checks validity of imported data with regard to V5 modeling criteria
- ☒ Corrects or improves the topology of the analyzed objects with dedicated tools to perform join or healing
- ☒ Corrects or improves the geometry of the



analyzed objects

- ☒ Provides global or local recognition and healing tools for an accurate and productive fixing approach

Product Key Customers Benefits

CATIA - Healing Assistant 1 (HA1) product provides... users reconciliation and fixing tools to heal models to be used in downstream applications such as manufacturing, analysis or tooling design. This product helps user checking validity of imported data (IGES, STEP or import via direct interface) with regard to V5 modeling criteria and improving the topology and the geometry of the analyzed objects.

Checking tools to assess surfaces... CATIA Healing Assistant 1 (HA1) checks the intrinsic validity of each surface, detecting selfintersections in boundaries, wrong topologies, thin surfaces etc. The surfaces to be repaired are moved to specific

bodies for easier handling. HA1 can also check connections between surfaces to find holes (G0 gaps in mm), sharp edges (G1 gaps in degrees), curvature breaks (G2 gaps in %). Surfaces involved in gaps can also be moved to specific bodies for easier analysis and repair.

Smooth face boundary and curves... CATIA

- Healing Assistant 1 (HA1) analyzes surface boundaries and provides tools to clean them. Then users can automatically fill all gaps up to a given value in mm, smooth all tangency discontinuities up to a given value in degrees and even erase all curvature discontinuities between edges of the boundary. It is also possible to automatically remove very small edges (very short curves) and to concatenate boundary curves to reduce the number of edges. The same operations can be performed on any type of curve other than surface boundaries. The modifications are controlled by a maximum deformation parameter.

Global and local Join feature... CATIA

- Healing Assistant 1 (HA1) provides an automated tool to carry out join operations. Global Join feature can assemble curves or surfaces according to a specified topological tolerance (merging distance). Local Join feature is available to join only selected edges of a surface, for example to close a gap, according to a local tolerance which can be user defined or computed automatically.

Automated Global and Local Healing...

CATIA - Healing Assistant 1 (HA1) allows users to modify the geometry of the faces of a multi-face surface in order to reduce gaps. The gap width is made smaller than a specified objective distance. Users can impose faces not to be modified if necessary (planar elements are frozen by default). They can also freeze faces and edges which need to be preserved.

ABOUT CATIA V5R18

CATIA is Dassault Systemes' PLM solution for digital product definition and simulation.

plm.3ds.com/CATIA

