CAD PROCESSOR

CAD-neutral simplification and preparation

CAD PROCESSOR

Powerful technologies for 3D data preparation and simplification

Open Cascade makes the best overall proposition of a bridge between complex and heavy engineering design and subsequent CAx systems and processes. CAD Processor offers a vast set of accurate, robust and efficient algorithms for effective repair and simplification of CAD parts and assemblies, exporting the data for the downstream use in the most suitable form.

- Graphical user interface is easy to navigate and learn. Simplification and analysis of parts and assemblies becomes a matter of a few clicks.
- Rich palette and unique combination of algorithms provide an opportunity for great variability of use-cases.

The software's functionality is offered in two editions:

- CAD Processor Desktop is a fully-featured desktop application.
- CAD Processor Enterprise is a server software, which includes a command line interface with rich scripting capabilities for automated batch processing of CAD-files reducing project timescale.

Granting maximum flexibility, a configured or customized solution based on CAD Processor can be developed to meet specific customer's needs.
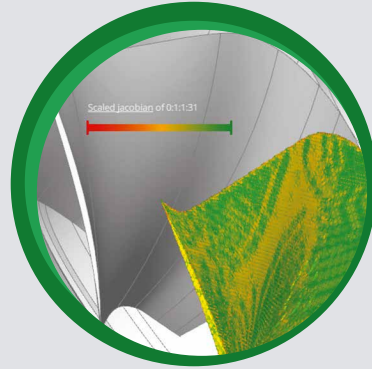
CAD Processor can be utilized for

- Augmented Reality/Virtual Reality scenes preparation

- Geometry simplification for 3D model visualization on low-performance devices and software

- Simplifying 3D data for numerical simulation

- Restoration and optimization of 3D data integrity for manufacturing

- Outfitting design – reference geometry simplification for design

- IP protection – hiding parts, deformation of details for proprietary information protection, preserving the outer geometry

- Quality control – comparison of manufactured part to its CAD model

- Modelling a lightweight digital mock-up of parts or assemblies from heavy heterogeneous CAD files

- Preparation of sheet metal components to fabrication (drawings generating, automated fabricating price estimation)
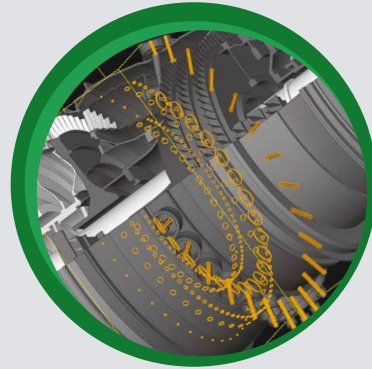
CAD Part Level Operations

Checking

Inspection of mass-inertia properties, contents (number of faces, etc.), geometric tolerances, open edges, bounding box, mesh quality, self-intersection, mesh-vs-part deviation
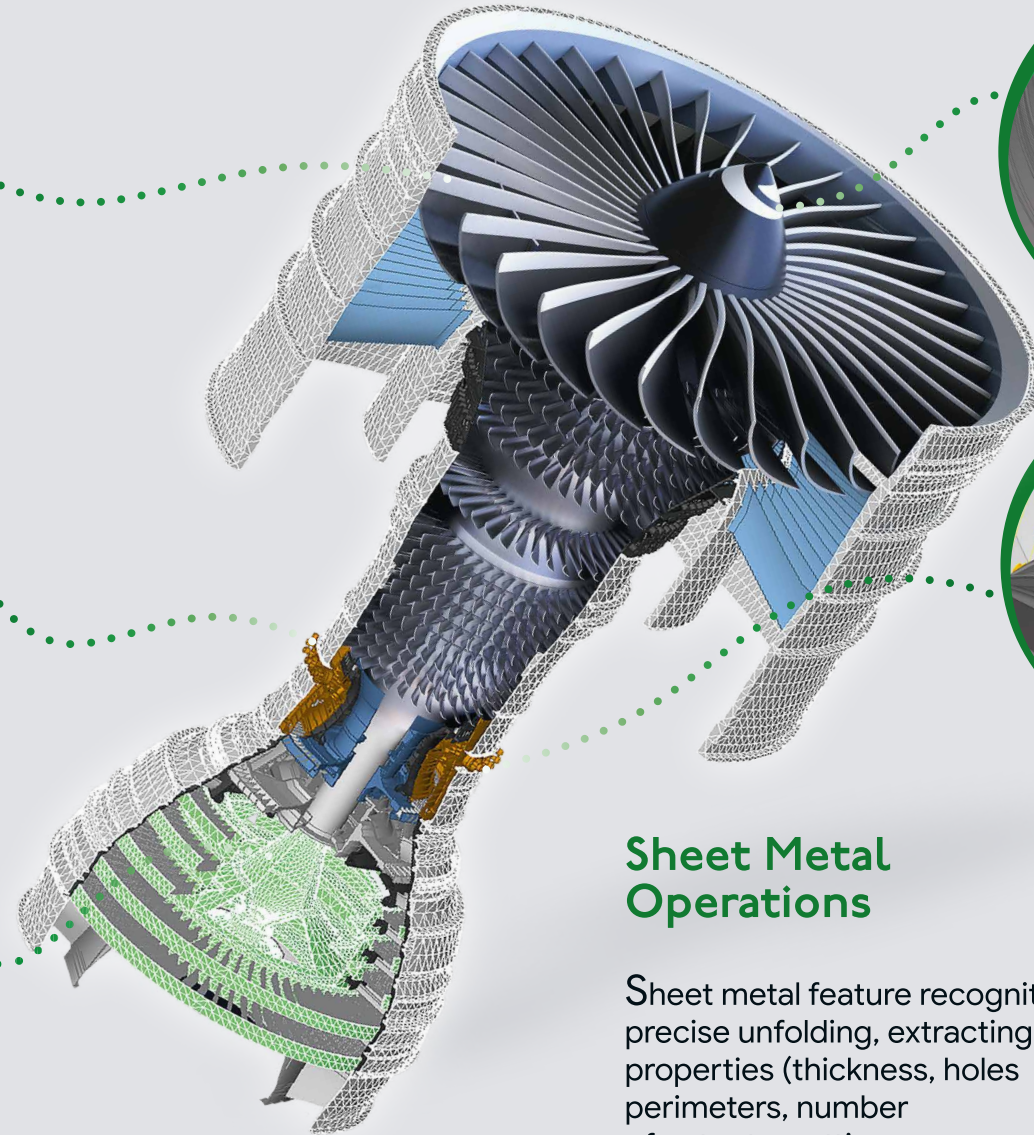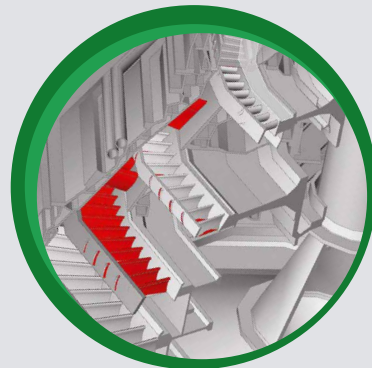
Defeaturing

Defeaturing allows to detect and suppress cylindrical and arbitrary holes, pockets, bosses, blends, isolated features (logos, engravings), suppress holes in mesh, repatch and remove faces
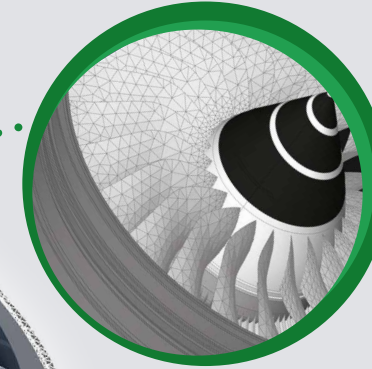
Healing

Healing features include detecting and filling gaps, recognizing canonical geometry, stitching faces, merging small edges, maximizing faces, inverting parts and auto healing
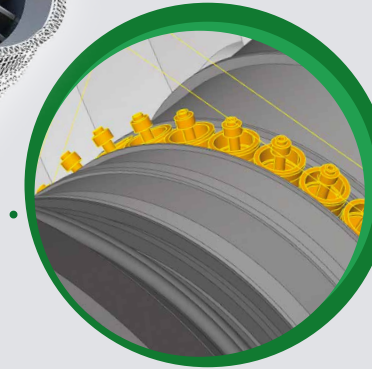
Meshing Operations

Visualization facets regenerating, surface and volumetric mesh, geometry wrapping, convex hulls building, fibers simplifying, mesh decimating and smoothing
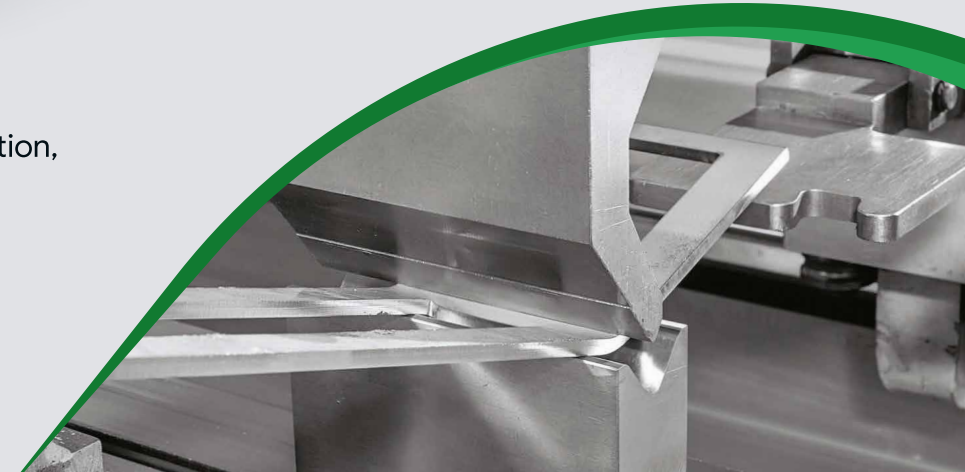
Assembly Level Operations

Detection and removal of invisible, small, non-solid parts, hunting down duplicates and breaking sharing, parts bounding, converting assembly items to subassemblies and extracting them, assembly flattening and traversing assembly hierarchy, obfuscation

Sheet Metal Operations

Sheet metal feature recognition, precise unfolding, extracting properties (thickness, holes perimeters, number of cutouts, cutting lines lengths, etc.)

About Open Cascade

It is a software development company which is laser-focused on digital transformation of industries through the use of 3D technologies.

Open Cascade offers a wide range of high-performance proprietary 3D software tools both open-source and commercial. The first ones have been developed, maintained and continuously improved since 2000. Whereas the second ones have been progressively aggregated in the Commercial Platform, based on which the company offers creating modern tailor-made industrial solutions that meet even the most sophisticated client's requirements.

Moreover, Open Cascade expands its portfolio by offering end-user industrial software products and delivering software customization and integration services.

Open Cascade provides its solutions and services worldwide. The company is a part of the Capgemini's Digital Engineering and Manufacturing Services global business line.

Learn more about Open Cascade at

www.opencascade.com

OPEN CASCADE

Backing your path to 3D