CORETECHNOLOGIE

10-07

OEMSOLUTIONS

CAD READER WITH API INTEGRATED IN YOUR SOFTWARE

PRODUCT NEWS

NATIVE FORMATS WITH SPECIAL FUNCTIONS

The CT Kernel_IO is the first API with mathematical geometry kernel and efficient readers, especially designed for CAD data import. The architecture of the intelligent kernel is based on the leading CAD converter 3D_Evolution© and handles solids, surfaces and faceted models. The functions are standardized for all formats, allowing the access to all parameters in the C++ classes. Thanks to the CT Kernel_IO, powerful functions such as healing, assembly management, high-precision tessellation, metaface, or automatic model simplification can be deployed and available in your software quickly.

READER

PERFECTED READER FOR ALL CURRENT CAD FORMATS

The fast and reliable reader, which are also used in the 3D_Evolution© conversion engine, import huge data volumes, by using an optimized memory management, and therefore they afford the conversion of sizeable models and assembly structures in one go.

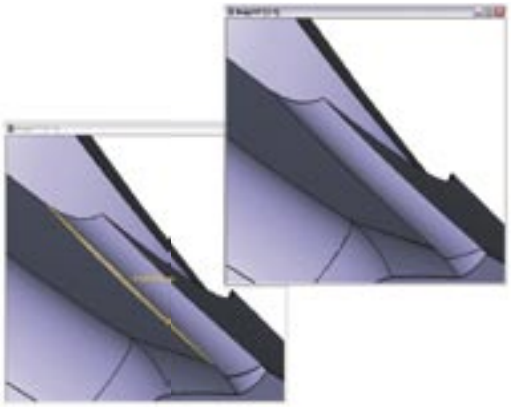
All information about the assembly structure could also be imported and scanned separately.

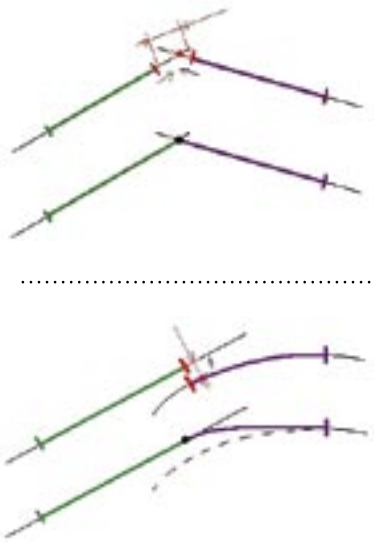
You will find all available formats in the list below.

HEALING

HEALING FUNCTIONS ENSURE IDEAL MODEL QUALITY

The adaptive adjustment of the models to the tolerance and the mathematic of the target system provides an excellent quality of the converted models. The healing functions are able to correct automatically system and construction failures, such as overlaps and breaks, and single surfaces could sew up to “waterproofed” solids with a user-defined accuracy.





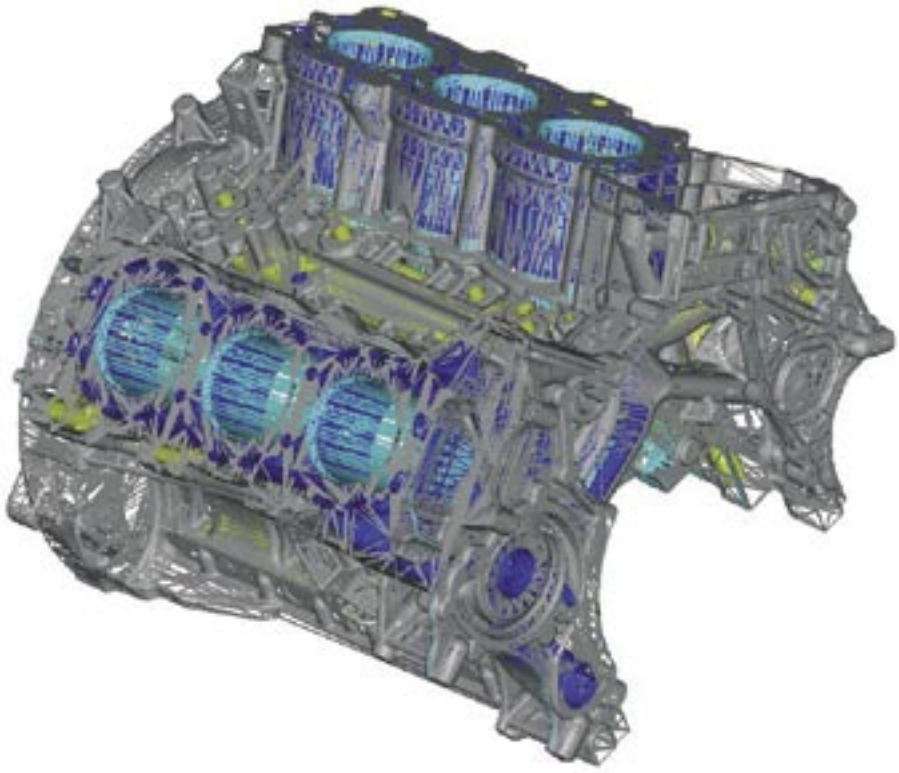
FEATURE READER

READING THE HISTORY AND PARAMETRIC WITHOUT CAD LICENCE

The 3D_Evolution© native interfaces read the original configuration of history and parametric directly out of the binary CAD data, without the necessary licence of the source system. The data structure of the FeatureBased module includes all common feature types of the current CAD systems. To this module belongs also the feature identification for unparametrical models. The parametric is created on the basis of geometry with identification algorithms for holes, chamfers, fillets, patterns, drafts, pockets and extrusion bodies. With our API you achieve access to all information.

TESSELATION

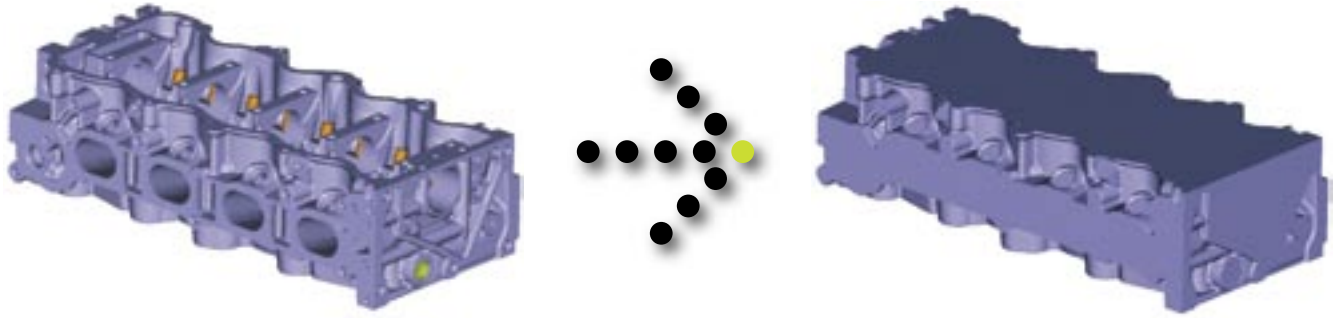
HIGH-PRECISION TESSELLATION



The accurate and very fast tessellation of 3D models and healing functions for triangulated data optimize your CAD data for digital mockup, VR and high end rendering. At this the API admits access to all parameters and options of the CT Kernel, such as maximal chord errors and size of triangles as well as the angular misalignment of two consecutive triangles. In addition output formats like VRML, JT, STL and Optimizer are available.

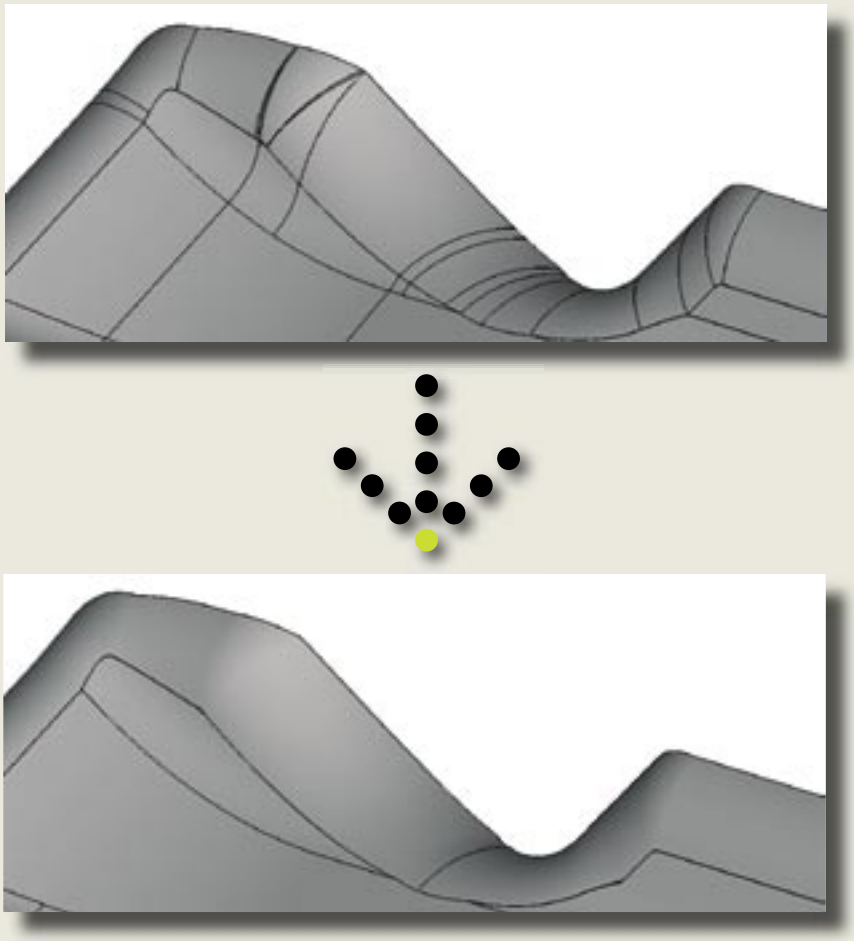
CREATE BOUNDING GEOMETRY

The Simplifier module creates at the push of a button a bounding geometry of separate parts and assemblies, due to save know how or to create simple models for the digital manufacturing. The output of the simplification is a bounding geometry as a clean solid, which could be proceed in every CAD systems.



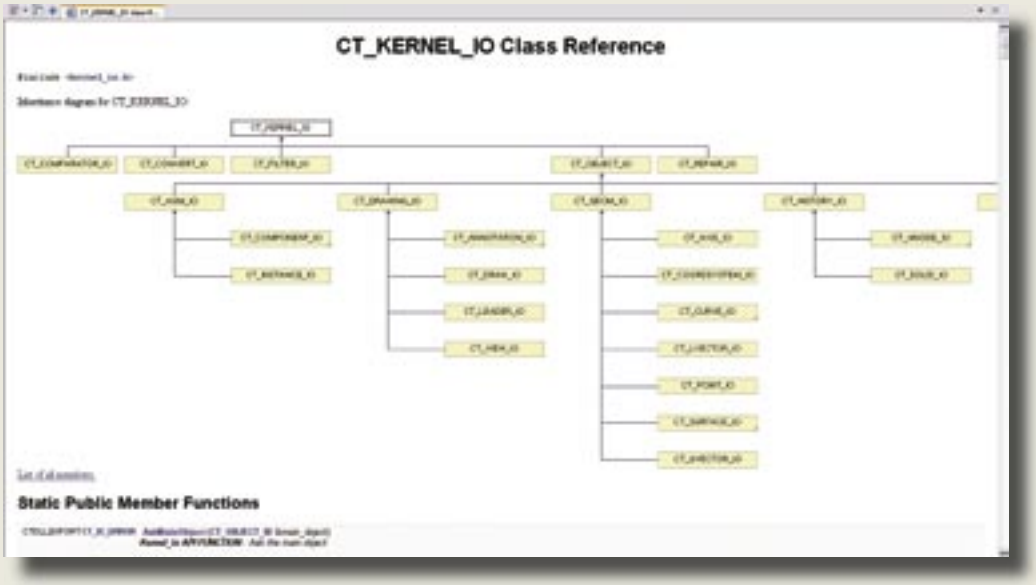
GEOMETRY OPTIMIZATION FOR FEM

Mini patches and their footprints get smelt automatically within user-defined tolerance limits with the metaface function. The resulting geometries are definitely easier to crosslink and they develop significant fewer elements. With scores of parameters the metaface function can be optimized for your application range.



INTEGRATION

EASY INTEGRATION IN YOUR SOFTWARE



The API is based on programming language C++ and on the Compiler VisualStudio.NET. The software comes with complete documentation and programming examples. The product CT Convert_EXE is a compact 3D model “loader” that provides very easy integration in your software solutions. Convert_EXE is based on the reliable 3D_Evolution© interfaces for the import of all current CAD data formats. The script language provides further options such as automatic data corrections, filtering, or specific assembly functions. Like all other 3D_Evolution© products CT Kernel_IO and CT Convert_EXE are available for Windows 2000 and XP, as well as for Linux operating systems.

3D_Evolution© CAD Interfaces

B-REP Native Interfaces and Plugins	reading	writing
CATIA V 4 up to 4.2.4 (model, exp)	X	X
CATIA V5* R6-R17 (CATPart, CATProduct)	X	X*
Unigraphics up to NX4 (prt)	X	X(Plugin)
Parasolid XT up to v. 17(x_t)	X	X
Pro/Engineer up to Wildfire 3(prt, asm)	X	X(Plugin)
Pro/Engineer up to Wildfire 3(neu)	X	X
I-DEAS (Prt, Mf1, PKG)	X(Plugin)	
I-DEAS (unv,arc)	X	
ACIS SAT up to v. 16 (sat)	X	X
HOLOS NT 2.4 (mod)		X
JT Open (jt)	X	X
CADDS 5 (_pd)	X	X
ROBCAD (rf)	X	X
Matra EUCLID (e3i reading and ci writing)	X	X
Straessle EUKLID (edx)	X	X
MechanicalDesktop SAT	X	X
OpenNurbs Rhino3D	X	X
Medusa 3D (asc)	X	

Standard Interfaces	reading	writing
VRML 1 and 2	X	X
STL (binary, ascii)	X	X
STEP AP214 / AP203	X	X
IGES 5.3/5.2	X	X
VDA	X	X

Feature / Assembly Interfaces and Plugins	reading	writing
CATIA V4 up to 2.4.2	X	
CATIA V5 up to R17	X	X(Plugin)
Unigraphics up to NX4	Jan/2008	X(Plugin)
SolidWorks up to 2007	Jan/2008	X(Plugin)
ProEngineer up to Wildfire 3	X	X(Plugin)

CONTACT

CT CoreTechnologie GmbH

Am Kreuzberg 7

D - 63776 Mömbris

Tel: +49 (0) 6029 99 43 86

Fax: +49 (0) 6029 99 43 87

info@de.coretechnologie.com