



# Polygon Cruncher SDK with JT file support

The fastest way to embed LOD in JT assets

**SIEMENS**  
JT Open Toolkit

## Overview

Polygon Cruncher SDK is a Windows Win32 C++ library for Visual Studio 2010/2012/2013/2015.

It includes Polygon Cruncher which is a powerful 3D mesh optimization algorithm. Applied on polygonal meshes you can downsize the vertex number up to 90%, keeping all the useful details for visualization.

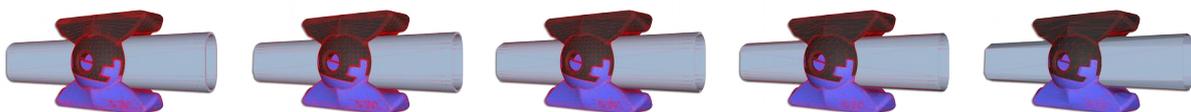
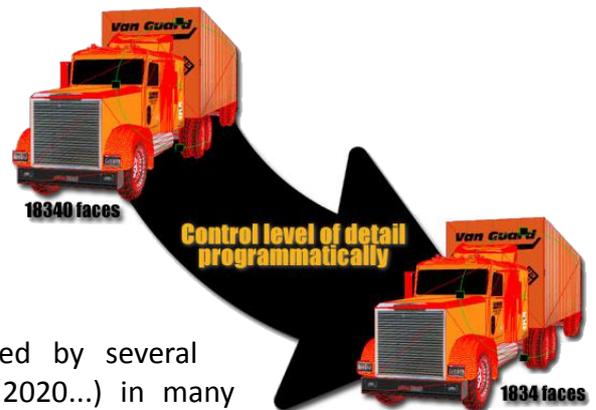
This robust technology for mesh optimization is used by several companies (Autodesk, Anark, Act-3D, FMC Konsberg, 2020...) in many application fields (CAD, architecture, real-time rendering, video games...).

Polygon Cruncher SDK now includes a JT file support based on Siemens Open JT Toolkit. It allows different scenarios around your JT assets.

Combined with the JT file format, Polygon Cruncher SDK gives the opportunity to generate quickly JT that embed LODs version of their assemblies.

Polygon Cruncher SDK can also be used to export JT assets to specific 3D formats or to import external data in your JT application.

Most advanced usage includes a direct integration of your own C++ 3D structure in Polygon Cruncher SDK to take advantage of the advanced features.



**Original**  
38000 faces

**LOD #1**  
30000 faces

**LOD #2**  
22500 faces

**LOD #4**  
15000 faces

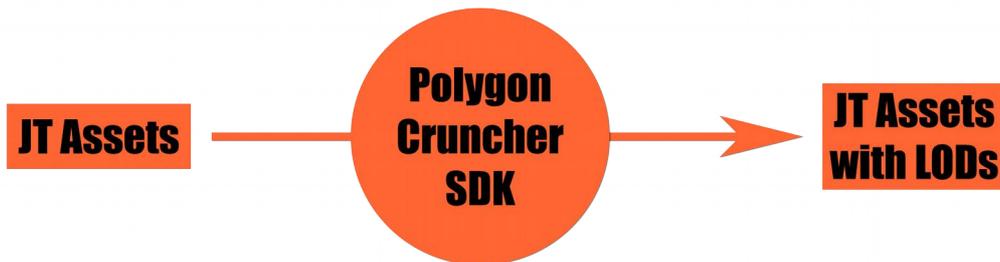
**LOD #5**  
7500 faces

Example of 5 LODs included in a JT file

## Possible scenarios for using Polygon Cruncher SDK with JT format

- **LOD mesh injection in JT file**

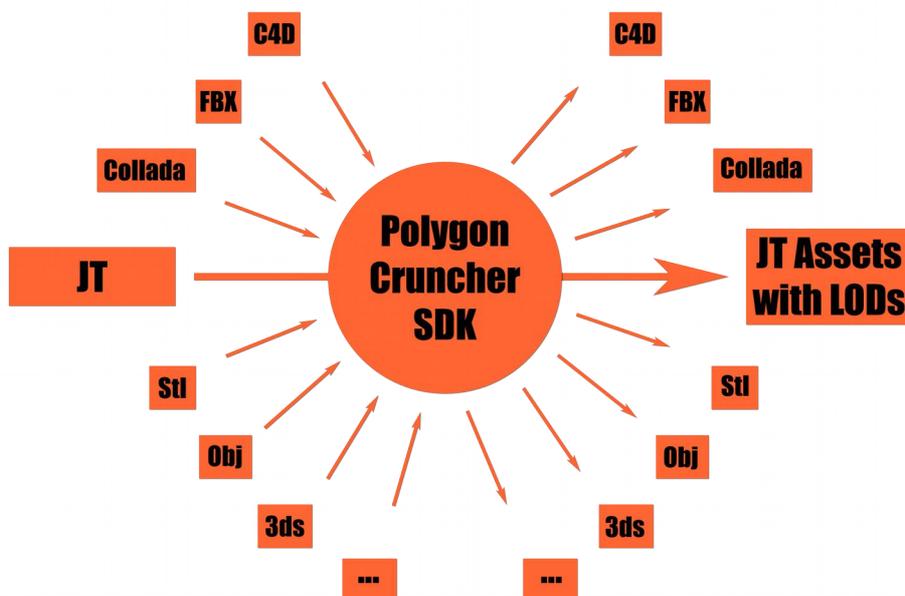
With only few lines of code and no particular knowledge of the Polygon Cruncher SDK, you can open a JT file and embed some LODs for every part of your assemblies. The implementation is straightforward. As it is based on Siemens Open JT Toolkit, the generated file is fully compliant with JT file specifications.



- **3D file format conversion from/to JT file**

Polygon Cruncher SDK supports common 3D file formats. You need few line of codes for converting a JT file to Collada or FBX and make your assets compatible with most of 3D rendering software. You can also import some assets in your 3D environment, by converting STL or Wavefront data to JT files.

Polygon Cruncher SDK supports the following formats: Autodesk FBX, Collada DAE, Wavefront OBJ, VrmI, Sketchup SKP, Cinema4D C4D, 3D Studio, Modo LXO, Lightwave LXO, StereoLithography STL...

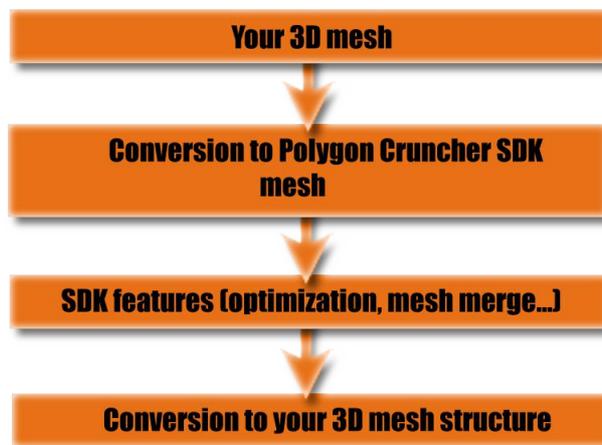


- **Convert your own 3D data from/to JT file**

An advanced way of using Polygon Cruncher SDK is to use its scene graph. If your 3D data requires particular JT file integration, you can write the conversion code to/from your 3D polygonal C++ structures from/to Polygon Cruncher SDK 3D C++ structures. This is the easier way to support JT reading/writing directly from your 3D application.

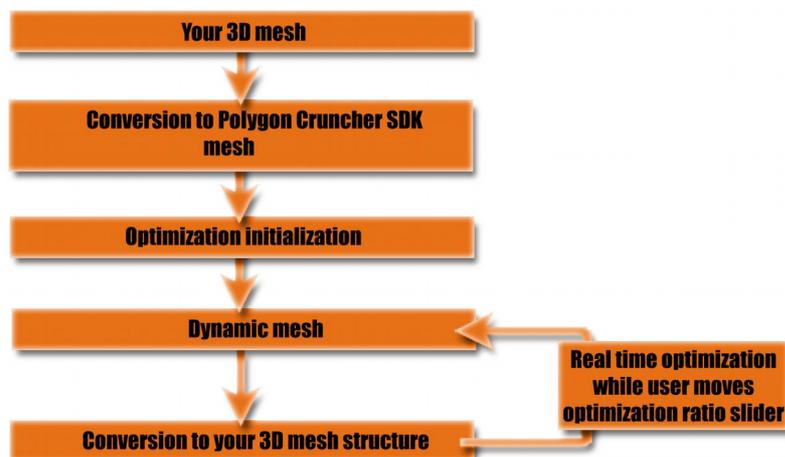
This also gives an access to the other powerful Polygon Cruncher SDK features, which not only includes optimization and conversion features but also triangulation, point welding, coplanar face merging, triangulation...

Polygon Cruncher supports N-Gon geometry and provides full support for UV, Vertex Color and specified normal information.



- **Real time optimization**

One of the most advanced way of using Polygon Cruncher SDK is to provide real-time optimization feature to your application, following the pipeline shown in the following schema.



## Licensing Polygon Cruncher SDK

- Polygon Cruncher SDK is a C++ library available for Windows x32 and x64 bits operating system.
- Polygon Cruncher SDK is compatible with Visual Studio 2010/2012/2013/2015.
- **License - One year or two year support**  
One fee, royalty free license which allows to use the SDK in one internal or commercial product. It includes technical support and free SDK upgrade for one or two years.  
Please, contact us for licensing price information.

### JT file support

The JT file support requires an active JT Open Toolkit license contracted with Siemens company.

- For users which have an active license, the JT file support for Polygon Cruncher SDK is provided at no additional cost.
- For users which not already have a JT Open License, please you can get more information about [JT Open Toolkit](#) on the Siemens Web Site.

Get additional information on the licensing possibilities at [request@mootools.com](mailto:request@mootools.com)