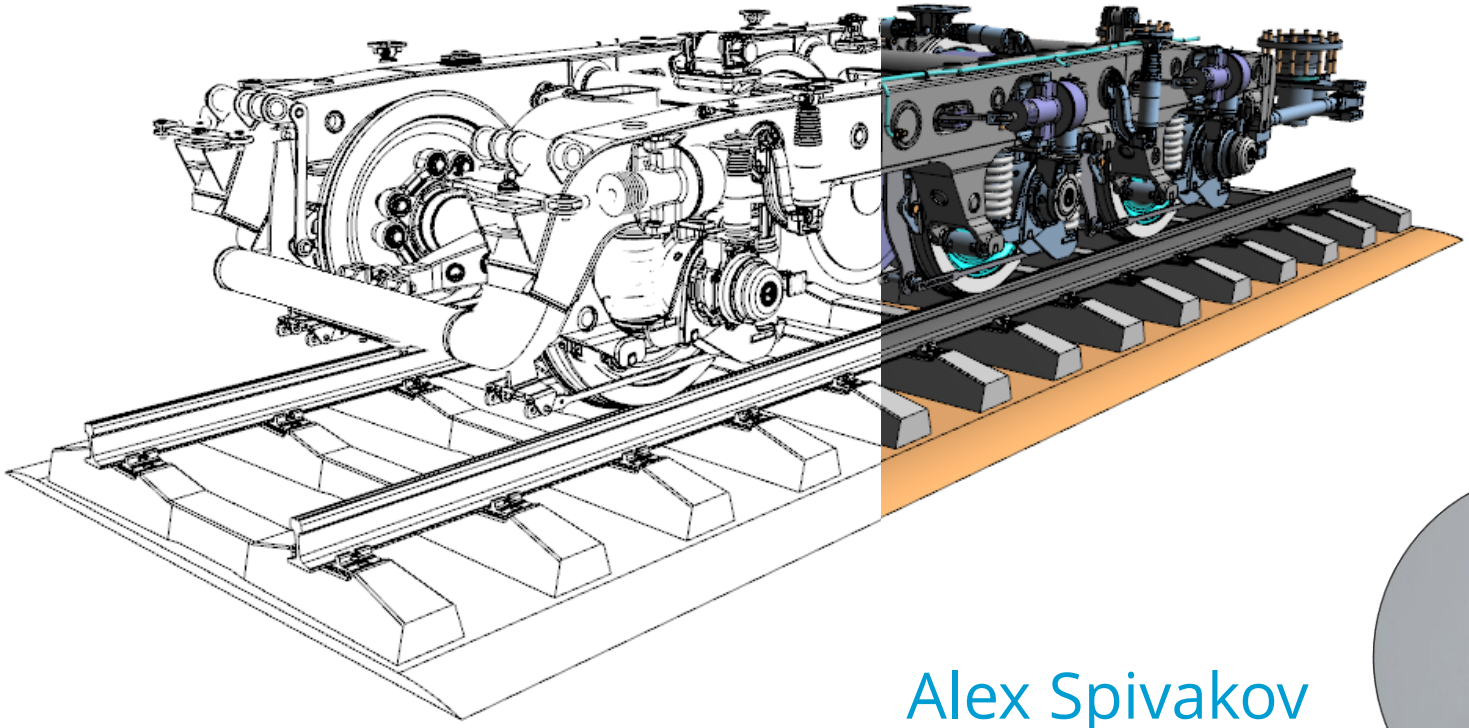
C3D Converter 2017

Our 3D Translator – Your Data Read

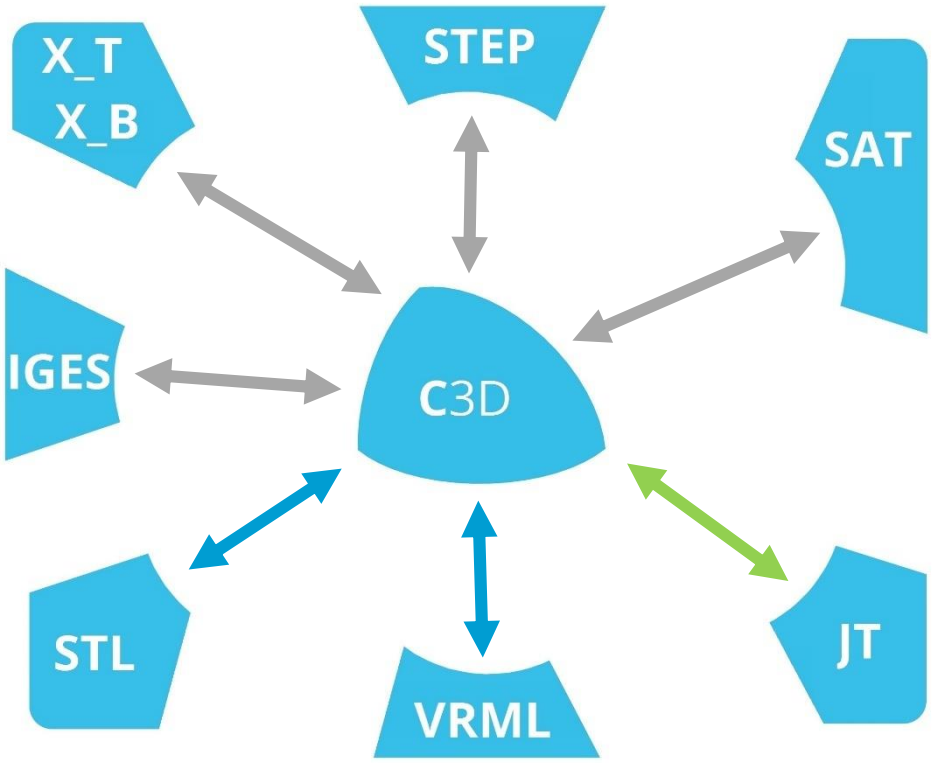


Alex Spivakov

Lead Developer

What is C3D Converter?

Software Component for CAD Data Exchange



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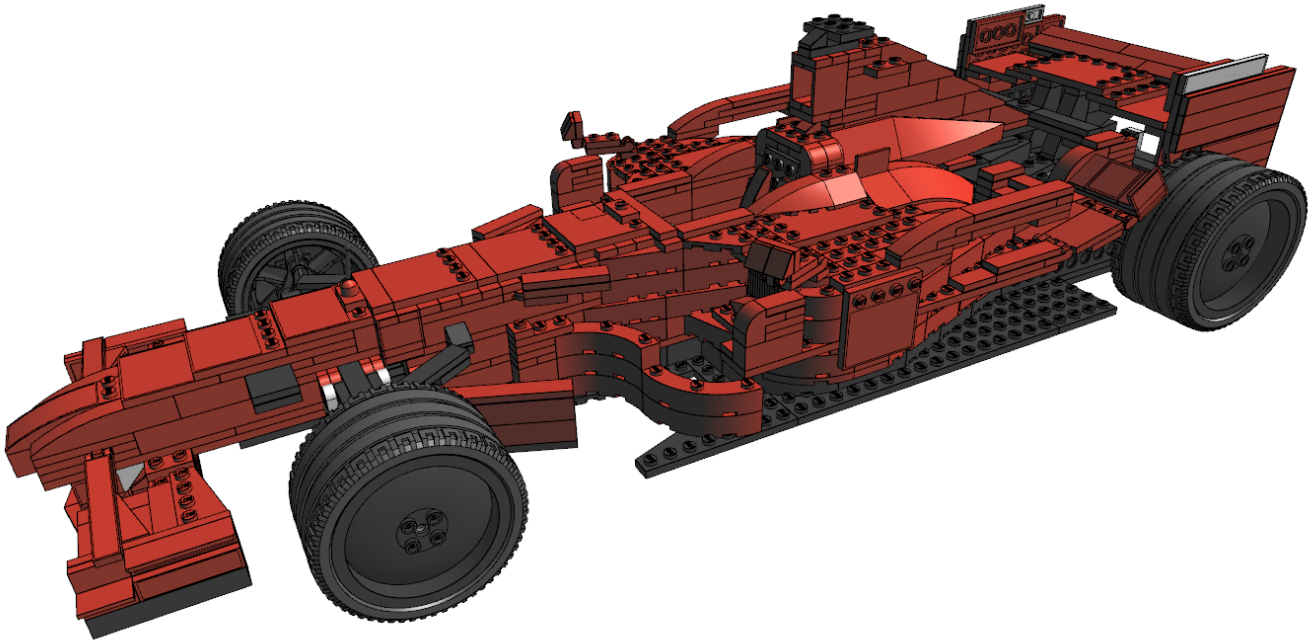
an ASCON company

Sk Resident

Convertion of B-Rep Models

Used in Precise Modeling



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Convertion of B-Rep Models

Format	Read	Write
IGES	v. 5.3	v. 5.3
STEP	AP203, AP214	AP203, AP214
Parasolid X_T, X_B	v. 27.0	v. 10.0
ACIS SAT	v. 22.0	v. 2.0

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Actual version list

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Convertion of Polygonal Models

STL

Converter adjusts the accuracy of exported models by parameters:

- maximum deflection
- maximum pivot angle of a normal curve (or surface)
- maximum length of a triangle side

VRML v. 2.0

Format includes assembly structure of a model

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C3D Converter Manual

T.2.1. General description of the boundary representation converter functions

Special functions defined in the global scope differ from the converter methods (described in Section T.1.2) in that they have the following limitations that are minor in most cases: they do not work with streams and they do not accept surface stitching requester as an argument.

All functions have the same signature type: they accept both the IConvertorProperty3D converter properties (described in Section T.1.3) and ItModelDocument model document (described in Section T.1.4) as arguments, and also the IProgressIndicator progress indicator (described in Section T.1.5) as an optional parameter. The behavior of all functions is also similar: all functions receive a converter instance, call one of its methods, and delete the converter when they finish. If successful, the functions return cnv_Success, otherwise they return an error code from the MbeConvResType enumeration.

T.2.2. General information about boundary representation converter parameters

When the converter sends data, it calls the **FullFilePath**, **GetIoPermission**, **GetIoPermissions**, **LogReport** methods of the IConvertorProperty3D interface.

For import the converter calls the **EnableAutoStitch** method of the IConvertorProperty3D interface.

For export the converter calls the **GetPropertyString**, **GetOriginLocation**, **ReplaceLocationsToRight** methods of the IConvertorProperty3D interface.

In standard implementation of the ConvConvertorProperty3D interface (it is described in Section T.1.3), the **fileName** field should contain correct full path to the exchange file. Default values of other fields guarantee that the methods work correctly. For export the file will be created or automatically rewritten if there are no limitations from the file system.

A standard RegularModelDocument or ConvModelDocument implementation can be selected as a model document. It is preferable to use the latter one if you need to pass item data using the STEP exchange format with as much details as possible.

It is permitted to pass a null pointer as a progress indicator.

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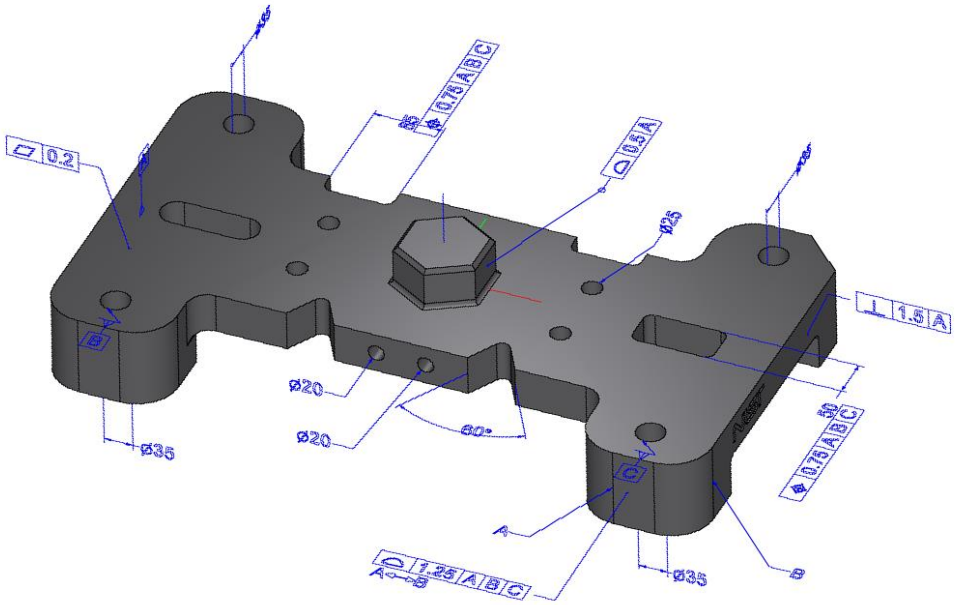
New Protocol Implemented



STEP AP242

with PMI:

- dimension
- tolerance
- specification

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New Format Added

JT v.9.5

Supports data compression and visual properties:

- transparency
- color

Combines Boundary + Polygonal representation

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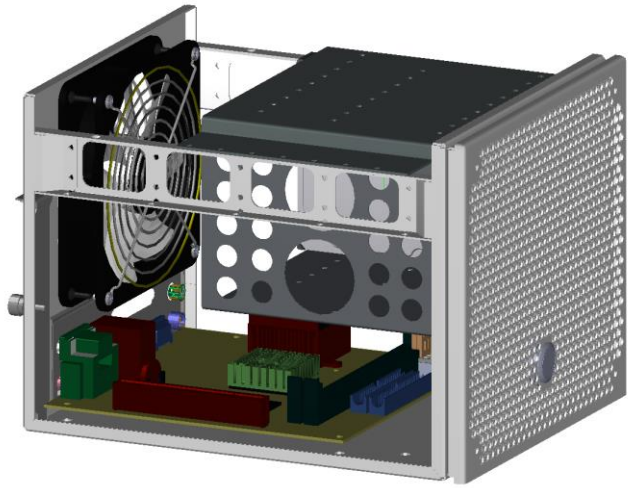
Future Plans for C3D Converter

JT convertion improvements:

- LOD management
- PMI import/export
- quality and performance



Extend variety of supported versions of X_T, SAT and JT

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Thank You!

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