

The I-DEAS® STEP Data Translator™ software imports and exports data in the STEP format. STEP (STandard for the Exchange of Product data) is an international standard (ISO 10303) for representing product data that has been established by the International Organization for Standardization.

Practical Usage

You can import and export single parts, multiple parts, and assemblies, specifically:

- Geometry, topology (solid parts, open parts, sections, wireframe).
- Configuration management data (part name, part number, material type, etc.).

Understanding STEP Application Protocols

STEP is implemented through application protocols (AP). An AP defines how to use STEP entities to represent data within a specific industry. APs are created by industry experts who define the scope of the AP and specify what data is used in the industry. APs must be tested and approved before becoming international standards.

Conformance Classes

APs are divided into conformance classes which organize the AP into smaller chunks of data. Each class supports the translation of certain types of data and/or representations of data.

APs Used in I-DEAS STEP Data Translator Software

The translator supports two application protocols designed to translate data for certain industries:

- AP203 (Configuration Control of 3D Designs) - translates geometry, topology, and configuration management data.
- AP214 (Automotive Mechanical Design Process) - translates geometry, topology, and configuration management data. Multiple shape representations are possible for both APs.

In AP203, part data can be represented by one of six conformance classes. The I-DEAS STEP Data Translator supports four of the six classes.

I-DEAS Step AP214 (core data for Automotive design process) is based on the Committee Draft (CD) level. As a result, users should consider AP214 to be a beta release. Future compatibility is not assured.

AP214 is specifically being developed for the automotive mechanical design process. It supports development stages during the design of the car body, power train, chassis, and the interior parts of the vehicle.

In AP214, conformance classes are defined as "Units of Functionality." The I-DEAS STEP Data Translator supports Conformance Class 1, which encompasses the units of functionality listed below.

AP214 supports both NURBS and analytic geometry representations with one restriction - all G2 analytic surfaces will be ignored during import.

AP203 Class

C1 - Configuration management (CM) data

C2 - CM data plus non-topology surface and wireframe (geometrically bounded surface representation and geometrically bounded wireframe representation)

C4 - CM plus manifold surface with topology

C6 - CM plus advanced BREP

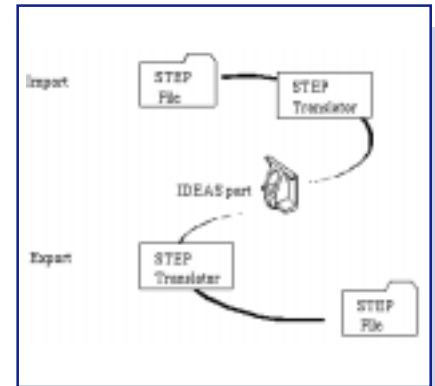
I-DEAS Entity

Data Management attributes such as part number, suppliers, data created

Solid part
Open part
Wireframe section

Solid part
Open part

Solid part



Importing and exporting data via the I-DEAS STEP Data Translator software.

AP214 Units of Functionality

S1 - Basic product data management

G2 - Wireframe and surface model

G3 - Connected surface model

G5 - BREP model

I-DEAS Entity

Part name, part number, description creator (other user attributes not supported)

Section
Wireframe
Solid part
Open part

Solid part
Open part

Solid part

Prerequisite

Core Master Modeler
-or-
I-DEAS Product Design Package
-or-
I-DEAS Artisan™ Package

For More information

For more information, contact your local SDRC representative or call 1-800-848-7372.