



## CAD2CyPhy: Bringing CAD Data Back into the Model

### Overview

A CAD assembly xml file contains information about CAD assemblies and the CAD component parts for each assembly. After a CAD assembly has been assembled by Creo using the CADCreoParametric application, metric information about child assemblies, parametric and size-2-fit parts can be queried and saved into a CAD Metric xml file. The metric information can be imported into GME model and the added to affected components and child assemblies as CyPhyML CADProperty objects using this interpreter.

The following metric information is saved in the metric xml file:

- [1] Scalar Properties: Volume, Mass, Density and SurfaceArea
- [2] Center of Gravity
- [3] Material
- [4] Inertial Tensor
- [5] Principle Moments of Inertia
- [6] Rotation Matrix and Translation: Only for child components and child assemblies and relates them to the parent assembly.

### Supported Context

Top level assembly in the model has a unique assembly ID that is unique in the entire model tree. IDs of components and child assemblies are unique within the context of the top-level assembly where they reside. The CAD Metric xml file refers to components and child assemblies via the IDs. The interpreter reads the top-level assembly's ID from the file and traverses the entire model tree to find it, then updates the parametric, size-2-fit components and child assemblies within that top-level assembly so the interpreter is independent of the active or focused model(s). Click on the interpreter's icon to start the interpreter.

### Options

#### Select CAD Metrics File:

Select the CAD Metrics file to be imported back into the GME model.