SIEMENS

3DSync

Providing the power to import and edit 3D mechanical CAD models

Benefits
- Import and edit foreign 3D CAD models regardless of their source format
- Protect the investment in your existing 3D CAD system with a low-cost, complementary tool
- Reduce re-use costs on imported 3D mechanical models

Features
- Built on exclusive Siemens synchronous technology, designers can manipulate the model directly – not a complex feature tree
- Includes 3D translators for file formats both neutral (ACIS, IGES, JT, Parasolid) and native (Autodesk Inventor, NX, PTC, Solid Edge, SDRC, SolidWorks; Catia V4 and Catia V5 available with an additional purchase)

Summary
3DSync is an affordable 3D CAD editing tool that uses synchronous technology to help designers work better with imported 3D mechanical part models. Enabling design teams to edit models independent of source tool and/or version, 3DSync provides robust functionality within a single, easy-to-use tool – with a short learning curve. It's intended to be used in conjunction with an existing CAD system and is the perfect complement to help companies reduce time and costs with imported data re-use. Creating a new design variation based on an imported part, adding material to a supplier's model to withstand increased operational loads, or adding rounded edges
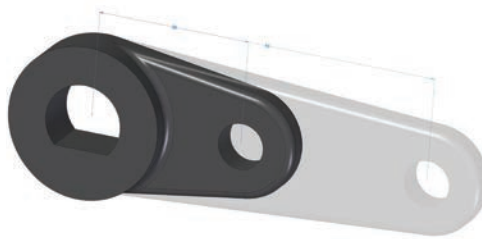
and drafted faces for manufacturability – 3DSync quickly and easily handles these everyday modifications.

An industry problem
Product design often requires handling 3D models from multiple sources, including OEM, suppliers and other third-party design contractors. To save time incorporating these assets into your products, your team must be able to edit this data from a variety of CAD formats. Different CAD platforms use proprietary formats that only the source system can edit. It is costly to own all of these various systems and to employ designers proficient in all platforms. Plus you have to deal with a model's history, and most history-based 3D CAD systems are designed to work best with native, interrelated features. This collection of feature intelligence is lost when models are translated to and from different CAD systems making it difficult, if not impossible, to determine the original design intent. And many systems exclude the tools to extensively manipulate imported parts.

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In this case, any changes require interaction with the source. Then backward compatibility restrictions within the source CAD system often force you to translate the model even within the same product offering. You lose the ability to leverage the part history if your source supplies files created on a later version of the same CAD system!

When surveyed, engineering organizations specified several serious challenges to effective and efficient design reuse:

- Model changes require expert knowledge of original design intent and the history tree making edits difficult for anyone but the source designer

- Different CAD release versions create incompatibilities

- Numerous errors in geometry translation force a complete redesign in a new CAD format

A low-cost solution for utilizing imported 3D models
3DSync provides a single, easy-to-use system for importing and modifying 3D data from multiple sources, as well as the ability to efficiently export finished models. 3DSync overcomes the difficulty most competitive systems have in editing imported data, while its low cost makes it a viable companion to your existing CAD system, protecting your investment in your enterprise-wide CAD implementation.

Powerful editing capabilities
Built on the exclusive Siemens synchronous technology backbone, 3DSync gives you robust editing flexibility without complex model history restrictions. You manipulate the geometry, not a feature tree; edits made only to affected parts of the model give blazing fast results. Design intent is derived from the model, and Live Rules functionality maintains the intent you require – regardless of the feature history. Live Sections lets you easily visualize and edit 3D models; by modifying familiar 2D elements within the live section, you change the 3D geometry. 3DSync allows you to add configurable 3D driving dimensions and geometric constraints to add design intent and manage edits while allowing flexibility for future modifications. You can even define equation-driven dimensions that automate fast design changes. This direct interaction facilitates precise, controlled edits free from unfamiliar, pre-existing geometry relations.

What's included?
3DSync contains powerful synchronous technology modeling capabilities and includes built-in 3D translators for importing and exporting data from popular 3D CAD formats as well as industry-standard formats such as IGES, STEP, Parasolid® kernel and JT™ data format. Robust geometry cleanup and optimization tools allow you to fix translation errors. And along with synchronous part modeling functionality, basic assembly management tools are included. You can even use interference checking to validate imported assemblies.

Complementary to your overall design enterprise
If your product development requires the re-use of imported 3D data, you will find that 3DSync is a perfect, low-cost companion to your current CAD system, providing powerful and exclusive synchronous editing tools without compromising your previous investment. 3DSync's ease-of-use promotes in-house maintenance of product design models, reducing vendor change fees and shortening the development timeline. Engineers and analysts who need to experiment with different design scenarios or prototype configurations will value the simple editing functionality. Manufacturing entities can make the changes they need to adapt the product to available tooling.

Features *continued*
- Easy-to-use software speeds adoption and increases productivity

- Live Rules and 3D driving dimensions control the model design intent, for precisely controlled edits – even without original model history

- Configurable dimension and geometric constraints accommodate future edits