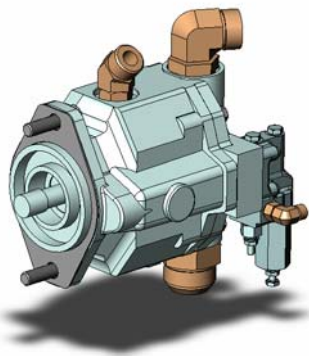




Top 10 Reasons Why More Engineers are Choosing SolidWorks Over Solid Edge

SolidWorks® and Solid Edge® both emerged as next generation CAD solutions in the mid 1990s, boasting ease-of-use and rich functionality. While on the surface these CAD applications appear similar, there are significant reasons why tens of thousands of engineers and designers are choosing SolidWorks over Solid Edge.



	SolidWorks	Solid Edge
1. Strong User Community and Support Network	☑	—
2. Focused Vision and Clear Future	☑	—
3. Unique Productivity Tools	☑	—
4. eDrawings™	☑	—
5. Fully Integrated Finite Element Analysis	☑	—
6. Consistent Performance and Design Flexibility	☑	—
7. Robust Configuration Management	☑	—
8. Easy to Customize	☑	—
9. Rich and Comprehensive Content	☑	—
10. Lightning-fast Performance	☑	—

Reason No. 1 – Strong User Community and Support Network

The adoption rate of a software application is a powerful indicator of its capabilities, customer satisfaction rate, and future longevity. A large user base, both in commercial and educational arenas, ensures that embracing companies will have access to the training and support needed to succeed. Further, large user communities allow embracing companies to hire trained employees, benefit from the knowledge of other users, and find suppliers, job-shops, and contractors which can seamlessly utilize their data.

SolidWorks has significantly outpaced Solid Edge, not only in seat count, but also in developing a global user community and support network.

	SolidWorks	Solid Edge
Commercial User Base (licenses)	140,000	50,000
Educational User Base (licenses)	145,000	100,000
Local Support Channel (VARs)	250	47*
Independent User Groups	54	16
Independent Books Published since 2002	14	3
Available Contracting Companies**	1029	28

* Source: www.solidgedigest.com

**Comparing SolidWorks Manufacturing Network to Solid Edge Voyage B2B Supplier listing

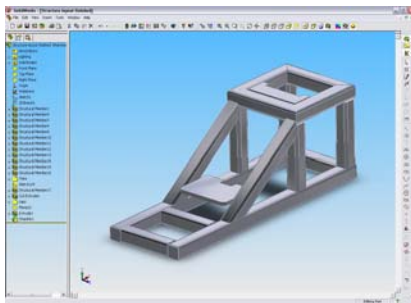
"Last week, the company (EDS) laid out plans to sell off part of its Product Life-cycle Management software division in an effort to jumpstart its recovery. In general, analysts viewed the proposed sale as a favorable development that would curtail the company's exposure to an underperforming asset that has dragged down results in the past."

EDS Watchers Await Other Shoe's Drop

10/22/03 09:38 AM ET

By **Melissa Davis**

TheStreet.com - Stock News



SolidWorks users can easily create welded frame structures complete with gussets and end-caps. Component lists and cut sheets are automatically generated.

Reason No. 2 – Focused Vision and Clear Future

Choosing to implement a new 3D mechanical design solution is a weighty decision, which requires significant money, time, and labor. Therefore, it is important not only to analyze the software's functionality, but also understand the vendor's future vision and business focus.

The SolidWorks Corporation, owned by Dassault Systemes, shares its parent company's vision — providing best-in-class engineering solutions. One hundred percent focused on 3D mechanical CAD, SolidWorks has established itself as both a flagship product and significant revenue generator. All annual reports and earning calls emphasize SolidWorks as a significant and strategic portion of Dassault Systemes' plans for continued growth.

After several turbulent years in which it changed ownership, Solid Edge is now one of several CAD applications developed by the UGS PLM Solutions division of EDS Corporation. The future of UGS PLM Solutions, and specifically the Solid Edge product, is unclear.

- Solid Edge does not fit its parent company's core business – IT outsourcing.
- Dwarfed by Unigraphics® NX, I-deas®, Teamcenter®, and NX Nastran, Solid Edge contributes less than 5% of the revenue of the UGS PLM division.
- In March 2003, new CEO Michael Jordan announced his mission is to refocus EDS Corporation on their core competencies — IT outsourcing
- In October 2003, after several quarters of poor earnings, EDS Corporation publicly announced its intentions of selling a substantial portion of the UGS PLM division.

Reason No. 3 – Unique Productivity Tools

Beyond saving a few mouse clicks, SolidWorks focuses its development on innovating toolsets that yield tremendous productivity gains. Companies using SolidWorks have distinct advantages over those using Solid Edge in that they can:

Compare Geometry – SolidWorks allows models to be compared in geometry and features. The visual interface allows users to easily determine differences between two parts, eliminating the need to compare independent dimensions.

Schedule Tasks – Whether simply printing, batch translating, or creating standard drawings, SolidWorks Task Scheduler allows users to perform the job at off-peak hours.

Analyze Thickness – Designers of molded parts can eliminate creep, warp, and sink by analyzing variations in a part's thickness.

Detect Undercuts – SolidWorks automatically checks the manufacturability of a model by not only analyzing draft, but also checking for undercut regions.

Easily Design Welded Frames – SolidWorks allows users to quickly define welded frame structures and automatically calculates the needed cut lengths and components list.

Reason No. 4 – eDrawings

In today's economic environment, sharing product information with suppliers and customers is not only crucial for rapid product development but is also effective in catalyzing sales and marketing.

SolidWorks has created eDrawings, a unique and powerful method for communicating 2D and 3D design data. eDrawings effectively removes the barriers of file incompatibility and drawing misinterpretation.

eDrawings' rich features include:

1. **Built-in Viewer** – eDrawings are a complete, self-contained communication tool. To view an eDrawing the recipient needs only to open the file. No software is required to be purchased or installed.
2. **Ultra Compact File Size** – eDrawings, which are substantially smaller than the CAD files, are easy to share. They can be sent in emails or downloaded from web sites, even over slow Internet connections.
3. **Robust Interpretation Tools** – eDrawings make models and drawings easy to understand with powerful toolsets.

- Hyperlinked Views – Eliminates endless searches for related views, sections, and details.
- 3D Pointer – Helps users identify corresponding geometry in multiple views.
- User-defined Layouts – Allows recipients to easily view different (but related) areas of the drawing at once.
- Drawing Animation – Brings 2D drawings to life! Uses the power of 3D to intuitively show how drawing views relate to the physical design.

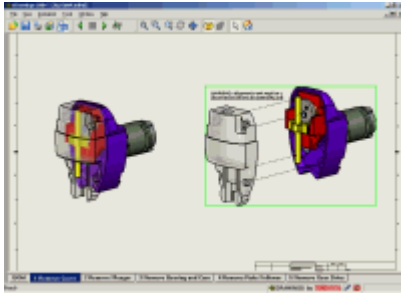
eDrawings Professional extends data sharing to full collaboration by adding dynamic section tools, measuring, full view and markup capabilities, and the ability to explode and move components.

Solid Edge does not have capabilities equal to eDrawings. Solid Edge data sharing requires large packaged files, and installed viewing applications. Challenges of version incompatibility and drawing misinterpretation still exist. Further, to gain view and markup capabilities found in eDrawings Professional, all recipients must purchase data management modules.

Reason No. 5 - Fully Integrated FEA Analysis

Engineering analysis is becoming a mainstream function of the design process. SolidWorks recognizes this and provides FEA analysis in its core product. You can gain basic insight into how parts will function under real-world conditions with COSMOSXpress™, a point-and-click stress analysis wizard built into SolidWorks 3D mechanical design software. COSMOSXpress™ guides you step-by-step through the design analysis process to help improve the integrity of your designs.

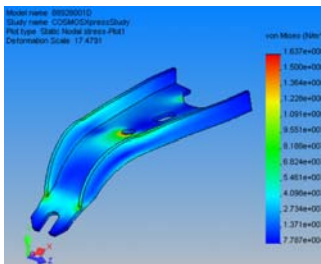
Solid Edge provides no such solution. Engineers desiring analysis capabilities must purchase third-party applications.



Award-winning eDrawings allow SolidWorks users to easily communicate their designs.

"Because eDrawings Professional allows our customers to view measurements on the screen and make changes to the file, we've been able to cut the design review time down to a day, or even hours. When you're talking about time to market, that's a significant reduction."

Patrick Crooks
Canadian Tool and Die



"When you create alternate assemblies in Solid Edge, functionality in other areas of the Solid Edge product is impacted. This impact is typically felt as a restriction..."

**Excerpt from
Solid Edge V15 Help**



SolidWorks can manage entire product families in a single file, and easily controls design variations with Microsoft Excel.

Reason No. 6 - Consistent Performance and Design Flexibility

The development team at SolidWorks had the foresight to make design flexibility and relationship management core elements of the software. Regardless of the combinations of commands, SolidWorks always yields consistent, predictable results.

In Solid Edge, many of the advanced features can NOT work in combination with one another. For example, when creating *Alternate Assemblies* (assemblies in different positions or with different components), the *Check Interference* command becomes limited, the motion simulation capabilities are disabled, and any Inter-Part Relationships are deleted. These inflexibilities drastically increase Solid Edge's learning curve and require users to spend additional time planning alternate approaches to their designs.

Reason No. 7 - Robust Configuration Management

Designers that build families of products which vary in accessories and size options, or show designs in different manufacturing states and positions, need an optimum method for creating, managing, and propagating change throughout the product variations.

The powerful configuration capabilities in SolidWorks not only allow designers to easily define and manage product variations in a single CAD file, but allow the permutations to be driven by Microsoft® Excel® tables. This approach is unique in that:

- It allows rapid family creation using Microsoft Excel functionality (Cut, Paste, Formulas, and Auto Population).
- Design changes can be universally or selectively applied to product family members.
- Design parameters can be edited through either the design table or at the model level.

Solid Edge does not have the power or flexibility of SolidWorks. Solid Edge requires that product variations be stored in individual files, and uses individual variable lists (not tables) to control the design parameters. This cumbersome approach can create thousands of additional files and requires tremendous effort to propagate changes. As stated previously, *Alternate Assemblies* restricts the effectiveness of other Solid Edge functionality, and its use of Excel is difficult and limited.

Reason No. 8 - Easy to Customize

Automating common tasks and integrating CAD into different business systems results in large returns-on-investment. CAD applications must have a user-friendly, open architecture that allows all levels of customization.

With SolidWorks, users can easily customize processes, regardless of programming skills. SolidWorks not only has a powerful Application Programming Interface (API) with functions that can be called from Visual Basic®, VB.NET, C++, or C#, but includes full capabilities to record and edit macros in Visual Basic for Applications (VBA). This feature allows nonprogrammers to easily automate combinations of commands. A user simply needs to record his/her mouse clicks, and SolidWorks writes the VBA programming code automatically.



Leading suppliers like SouthCo, provide SolidWorks native data on their web sites.

Other suppliers include:

- Danaher Motion***
- SMC***
- Bimba***
- FESTO***
- US Motors***
- Boston Gear***
- Black and Decker***
- Nook Industries***
- Emerson Power Transmission***
- Warner Electric***
- DE-STA-CO***
- Reid Tool***
- Jergens Inc.***
- Samtec***
- Kaydon***

Further advantages exist between SolidWorks and Microsoft Excel. Out-of-box, without additional programming or linking, SolidWorks users can fully control designs with Excel spreadsheets. The relationship between the model and Excel spreadsheet is bidirectional – a change in one updates the other.

It is difficult to automate tasks in Solid Edge. If a user wishes to customize Solid Edge at any level, programming expertise is needed, and the code must be written and compiled outside of Solid Edge. Solid Edge does not easily integrate with Microsoft Excel. Users can only link individual cells to model dimensions. This tedious and manual process cannot provide full design control or the bidirectional relationships found in SolidWorks.

Reason No. 9 – Rich and Comprehensive Content

SolidWorks recognizes that almost every designed product contains standard holes, fasteners, or purchased OEM components. SolidWorks has invested heavily in toolsets and web initiatives, creating the most content-rich CAD application available. Saving time and increasing productivity, SolidWorks users can quickly access needed geometry, rather than recreating it. The technologies include:

- **SolidWorks Hole Wizard** - a powerful toolset that allows users to create not only drilled, counter bored, countersunk, and tapped holes but also clearance holes, tap-drill, and pipe threads.
- **SolidWorks Toolbox** - a robust library of fasteners, structural steel shapes, and millions of standard parts and power transmission components.
- **3D PartStream.NET®** - SolidWorks has partnered with the leading suppliers of OEM components to provide native SolidWorks data online.
- **3D ContentCentralSM** (www.3dcontentcentral.com) - a web site in which users can share data. Currently the site serves thousands of models including bearings, connectors, human models, and batteries.

Solid Edge provides little content to speed product development. The available hole definitions and fastener libraries represent only a subset of those found in SolidWorks. Solid Edge does not offer any solutions similar to 3D PartStream.NET, and 3D ContentCentral, leaving users to spend hours modeling components themselves.

Reason No. 10 - Lightning Fast Performance



Standard benchmarks prove SolidWorks is 5 times faster at creating large assembly drawings than Solid Edge.

3D CAD applications need to be able to handle tremendous amounts of data in an optimized manner. Inefficiencies in common tasks add up to huge productivity losses. Users should not have to wait inordinate amounts of time for an application to open files, rebuild geometry, process design changes, and save data.

Leveraging multithreaded processes, intelligent data segmentation, and cached models states, SolidWorks has architected the world's fastest CAD application. Benchmark tests have shown SolidWorks to outperform Solid Edge in opening large assemblies, creating detailed drawings, and propagating design changes. In fact, the SolidWorks performance advantage over Solid Edge increases as assemblies grow in size and complexity.



This document highlights just some of the differences between SolidWorks and Solid Edge, which enable SolidWorks users to have significant advantages in getting their products to market in record time. SolidWorks offers more complete design tools and is architected to provide consistent, predictable results. The vast SolidWorks community and support network ensures users will get the information and training needed to maximize their investment.

Dedicated to innovation, the SolidWorks Corporation has a business focus and financial stability to support both the current and future goals of its customers.