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## From the editor...

Dear Readers,

A belated Happy New Year to all !

In this issue we have an international client profile from Jet Propulsion Laboratories and closer to home Alimax Ltd & Exhibition Services all of whom have made the switch to Solidworks.

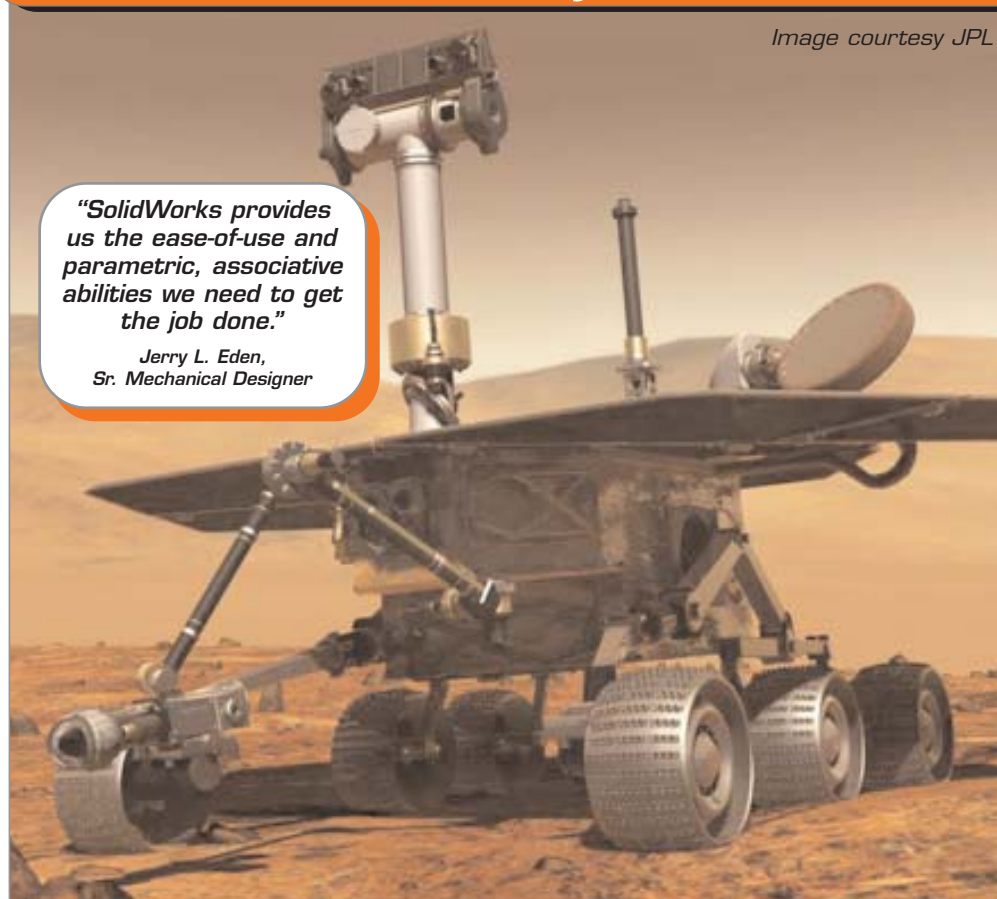
Also covered in this edition are new tips from the Application Engineers & the SolidWorks Knowledge Base.

We encourage all Intercad customers to contribute content for future issues. Please contact [julian@intercad.com.au](mailto:julian@intercad.com.au) for assistance on editorial submissions.

Julian Spencer  
Editor.

## Mars Attacked by SolidWorks

Image courtesy JPL



*"SolidWorks provides us the ease-of-use and parametric, associative abilities we need to get the job done."*

Jerry L. Eden,  
Sr. Mechanical Designer

Jet Propulsion Laboratories (JPL) is a state-of-the-art company that designs earth observation and inter-planetary space systems for projects such as earth mapping, ozone tracking and missions to Mars to map the surface and study the Martian environment and minerals.

JPL needed a mid-range CAD tool that would be easy to use by both experienced engineers and casual users: one that did not

need years of experience and training to use, yet could handle reasonably large assemblies and all required documentation.

Most other solutions did not have the expert modeling capabilities that SolidWorks provides, nor are they as fast and easy to handle as SolidWorks. Several were just 2D systems that did



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not offer the modelling capabilities that they required. SolidWorks fit their requirements nicely. Because of its ease-of-use, the hand-offs between engineers and designers and parts and integration have increased significantly. Engineers and designers can work more closely together. As a result, the turnaround for designs and fabrication have increased

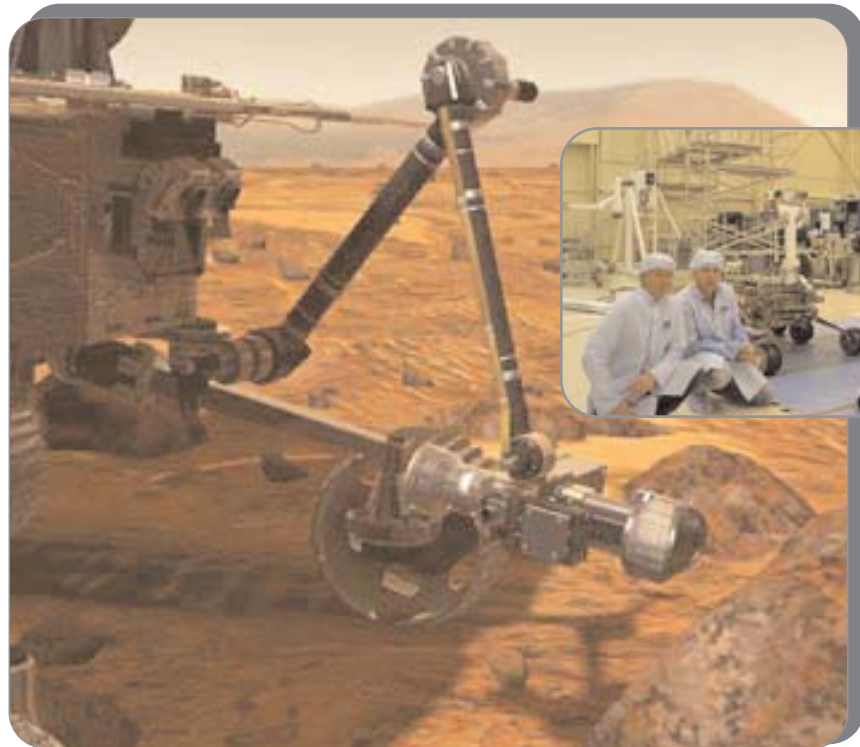
***"SolidWorks provides us the ease-of-use and parametric, associative abilities we need to get the job done."***

***Jerry L. Eden,  
Sr. Mechanical Designer***

two or threefold. It has lowered the cost of design by at least 30% and increased manufacturability by 30% because of better visualization

## ***Designing the Mars Rover***

Jerry Eden, Mechanical Designer at Jet Propulsion Laboratories, used SolidWorks 2D capabilities to complete drawings for his portion of the exciting Mars Exploration Rover (MER) project, a spacecraft that travelled to Mars and deployed a lander, which entered the Martian atmosphere. Once on the ground the lander released a rover that roamed the Martian countryside taking pictures



*The rock abrasion tool on the robotic arm grinds away the rock's surface, allowing scientific instruments to analyse the rock's interior. Inset the Mars Rover Team. Images courtesy JPL*

and collecting soil samples and sent them back home.

The total MER assembly came to 5,000 parts, most of those unique. Eden's work focused on a relatively small but critical component called the bridle assembly, which consisted of around 30 detailed 2D drawings. The bridle is a flat nylon piece that functions like parachute cords to slow the MER down once it entered the Martian atmosphere.

Working quickly, Eden used SolidWorks to automatically create manufacturing and interface drawings from the solid model. Interface drawings were important in illustrating the areas where the bridle system attaches to the housing inside the spacecraft. Because SolidWorks drawings are based on the 3D model,

you just update the model. And creating new views is a snap. "You place one view, you dimension it, you place another view, and you dimension that," Eden explained. "Creating views, auxiliary views, detailed views is really easy in SolidWorks as opposed to just a plain 2D package." In a 2D package, there's no automation. Every view is done by hand.

Eden estimated time savings up to 90% using SolidWorks over conventional 2D CAD for creating detailed drawings. With SolidWorks, even a task as simple as printing a drawing can take 30 to 50% less time. ■



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# Alimax Bodies have less stress

**A**limax Ltd manufacture a wide range of truck bodies for the road transport industry. Predominantly producing Enclosed Van bodies, manufactured using their own system of interlocking aluminium extrusions (The Alimax system) & Curtainsider truck & trailer bodies.

Alimax have been using Solidworks for the past 12 month after switching from Autocad.

Interaction speaks with the Director Alex Squires.

Alex's favourite aspect of Solidworks compared to AutoCad is

the ease of drawing generation.

"Our body designs are broken down into four main assemblies, and we have multiple configurations of these assemblies to suit

**ALIMAX**  
THE ALUMINIUM TRUCK BODY SYSTEM

the wide range of truck chassis available.

'When an order is received, we simply assemble the

new body in Solidworks using the applicable configurations for that chassis and then generate the working drawings for manufacturing.

'Drawings are generated simply by importing the

desired

view

into a drawing file, you don't actually draw anything.

'Generating Isometric & hidden line views is also only a click of the mouse away, to generate drawings with this much detail in our previous system would take me many hours and

sometimes days says Alex.

'Productivity gains have been considerable for us, we are a small company of 12 staff, the business has grown 120% in the past three years and my role

has been both general manager & designer.

'In our previous system of

design/drawing, my time was almost completely consumed with design, to the detriment of the



Images courtesy of Alimax

management side.

'We were forced to consider employing more office staff to cover this situation. The implementation of Solidworks, my time spent on design has been reduced by around 70% and this has enabled us to use the resources saved on new office staff to be used in the production side, a far more beneficial outcome on the bottom line!

'If I had been told 12 months ago that we would save this much time, I would not have believed it, but for our business Solidworks has delivered.

A major benefit of 3D for us is the fact that we can sit with our client and show them their truck body on screen & you can make changes whilst they watch.

Continued next page.



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'Our customers can now see exactly what we will be building for them and this saves expensive rework later on.

'In the future we will utilise SW for creating manufacturing instruction manuals, and we intend to use some models on our website as well.

'We use Cosmos Express FEA for testing some of our components.

'Truck bodies are subject to considerable stress and in the past we would simply reinforce a part that was problematic.

'FEA testing gives us the ability to test these parts

and sometimes adding more material isn't the best solution.

'Thanks to FEA we are able to both solve the problem and at times lighten the body weight which is a benefit to road transport operators.

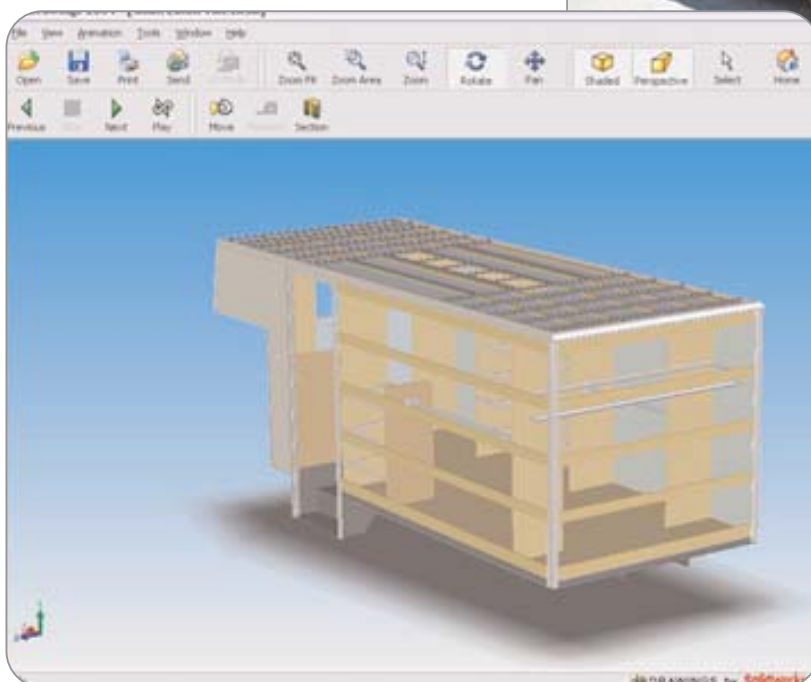
'What we believe is our

point of difference to our competitors is the foresight to invest in technology to give our customers the most cost effective solution to their requirements.

'We have invested heavily in tools such as Solidworks and in new products like our Alimax system, to which we regularly add new extrusions and manufacturing technologies.

'The quality of our products

***"If I had been told 12 months ago that we would save this much time, I would not have believed it, for our business Solidworks has delivered!"***



is the reason that we have considerable repeat work from satisfied customers which in turn drives our strong growth.

'For further information on Alimax see [www.alimax.co.nz](http://www.alimax.co.nz) ■

Images courtesy of Alimax



# Exhibition Services Pty Ltd

Exhibition Services specialises in undertaking and managing projects which require creative and technical skills with a sensitive appreciation of how science and elegant design work harmoniously with commercial reality. Interactions speaks with Karl Meyer Managing Director.

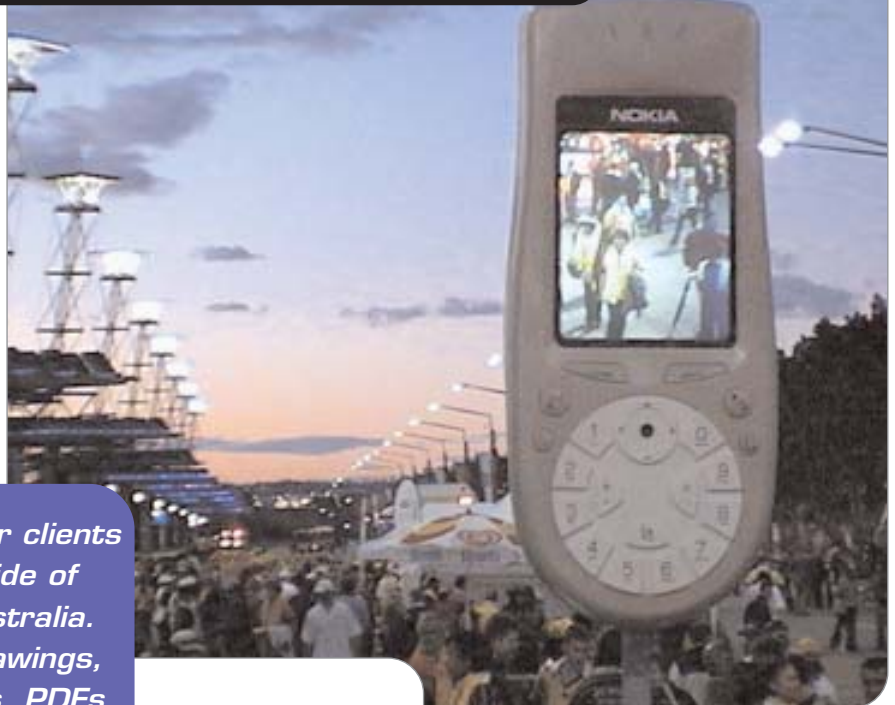
Our goal is to create innovative, robust exhibits that successfully communicate your message with style and clarity. says Karl.

Exhibition Services conceives, designs and constructs exhibits and exhibitions for Science Centres, Museums, Visitor and Interpretive Centres. We create large scale, creative one-off technical "exhibits" globally.

We have been using Solidworks now for seven months. Before SolidWorks we used ACAD LT 97.

Parametric 3D provides faster reworking, greater interface with mechanical 3d modeling and faster production drawing output for our steel and cabinet making.

*"90% of our clients are outside of South Australia. Using edrawings, renderings, PDFs of 2D drawings uploaded onto our secure client web site has made approval processes possible."*



*The Nokia Design through to on-site application. Images courtesy of Exhibition Services*



The cost savings in reworking mechanical and cabinetry due to interference and tolerancing issues has paid for the initial outlay of the software within seven months.

Using edrawings, renderings, PDF's of 2D drawings uploaded onto our secure client web site has made approval processes possible. 90% of our clients are outside of South Australia with the development of our most recent project The National Botswana Science and Technology Centre in Southern Africa. Solidworks

As a company that incorporates a range of manufacturing and construction techniques including but not limited to: structural, mechanical, electromechanical, hydraulic, glass, plastics, pneumatics, incorporating proprietary hardware and products, timber, temporary walling and spatial considerations with the detail of engineering construction.

*Continued next page.*



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provided a platform for bridging time and communication issues as a digital model often conveys more information than 2d drawings.

The rendering and animation package (SolidWorks Animator/ PhotoWorks) has allowed ES to deliver a more refined and professional design process to our customers.

We have been exporting from Solidworks to an FEA package for our structural and engineering analysis.

As an exhibition design, R&D and manufacturing company we bring a range of skills in the creation of technical interactives for Science Centres, Museums, Visitor and Interpretive Centres.



*The Nokia Design explosive view & construction.*

We produce large scale, creative one-off technical "exhibits" that require to work as if mass manufactured. We are uniquely placed in Australia as the



*The "G-Force" xtrem ride.*

majority of the conceptual, technical and construction happens within one company.

We understand that the more powerful the communication the more potent the result. Hence we design and construct exhibits that act as ultra effective communication



systems; to start to build that special relationship between exhibitors and audience, right then and there,

on the spot!

We apply the latest technology in new and innovative ways to produce cost effective exhibits that are designed to be quick and simple to use and fun to interact with. Our in-house expertise is complemented by diverse specialist staff, providing a wealth of experience, skills and creativity to produce superior results.

We believe that by engaging people so that they become much more than just passive observers, we "touch" the real person with an invitation to "come out and play". We are confident that our exhibits not only deliver information in a pleasing and interesting manner, but they also allow absorption that leads to changes in attitudes, opinions and behaviour.

For further information on Exhibition Services see [www.exhibition-services.com.au](http://www.exhibition-services.com.au) ■



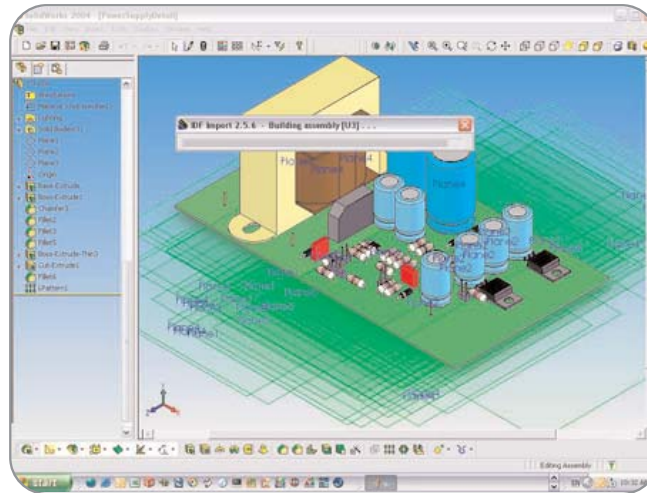
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## What's happening at Intercad?

### Protel/IDF Translator made the Gold Partner list!!

The SolidWorks® IDF 3D Modeler is a Bi-directional translator between SolidWorks and the Intermediate Data Format (IDF) including Australia's Protel. This is an electronics industry standard that allows the exchange of PCB design data between ECAD and MCAD systems via ASCII data. It enables you to create SolidWorks assemblies of your Printed Circuit Board (PCB) designs. You can also modify the SolidWorks PCB assembly and send the changes back to the PCB design system.

This product is fully integrated into the SolidWorks



application. You invoke the product commands from the SolidWorks File menu. The assembly that it creates is an editable SolidWorks assembly. Each electronic component is a SolidWorks part placed in the assembly.

Once you have created the Assembly of your PCB, you can then place this into your product assembly and check mechanical interference or other mechanical design errors. If you detect

any errors you can correct them in the PCB Assembly. You can change part locations, move mounting holes or edit the PCB shape. You then send the changes

back to the PCB design system by creating IDF data from your Assembly.

This approach provides an error free means of communicating design information between the mechanical and electronic design environments. The product has been tested with Cadence, Mentor, OrCAD, P-CAD, Pads, Protel and other PCB design packages.

[www.desktopeda.com](http://www.desktopeda.com). ■

## Graphics Card 10% Discount!

Don't forget the special offer for all SolidWorks Subscription Service customers.

Effective immediately any company with current SolidWorks subscription service is entitled a **10% discount** off any Intercad supplied graphics card. This value added offer applies to the following range of graphics cards: 3DLabs Wildcat Range -

for further information including technical specifications please go to [www.3DLabs.com](http://www.3DLabs.com) or [www.intercad.com.au](http://www.intercad.com.au) Search topic "Graphics Cards"

If you have any queries or would like to take advantage of this discount please contact us. This is not a time limited offer but instead applies to all customers who maintain current SolidWorks subscription. ■

**Please Note:** SolidWorks including 2004 SP2.1 and above will utilise real time

Texture Mapping and RealView (real time photo realistic rendering based on hardware acceleration).

For users wishing to take advantage of this exciting new technology graphics accelerators specific graphics hardware is a requirement. Many existing older technology graphics cards and those aimed primarily at the gaming market do not support this new technology. ■



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## Welcome to New Users of SolidWorks

### New South Wales

- Boval Engineering - sheetmetal 1 x SolidWorks, 1 x SolidWorks Office.
- Longwall Hydraulics, mine hydraulics, 1 x additional SolidWorks Office.
- Michael Hort Design - Industrial design 1 x SolidWorks.
- UNSW 100 educational Lic
- Rema Packaging 1x additional SolidWorks Office.
- Thinking Ergonomix - seating design 1 x SolidWorks.
- Gary Rodgers Pty - Mech design 1x SolidWorks.
- Power & data Corporation 1 x SolidWorks.
- Metro Engineering - Pressure vessels - 1 x SolidWorks.
- The Fifth P - point of sale display 1 x SolidWorks.
- Woolworths - 1 x SolidWorks.
- Macquarie University - 3 x SolidWorks.
- Dotmar - 1 x SolidWorks.
- Faulkner Collins - Shop fitout - 1 x SolidWorks.
- 4 Design - Industrial designers - 1 x SolidWorks.
- L.E. Otton and Assoc. - Consulting Engineers 1 x SolidWorks.

### Victoria

- Tarapath - electronics manufacturers 1 x SolidWorks Office.
- Baker Heart Research Institute - Applied Cardiovascular Research 1 x SolidWorks Office.
- Hayman Reese - Australia's leading brand of towbars and towing accessories 1 x SolidWorks (total 4 seats).
- Arrk Silhouette - Australia's largest Rapid Prototyping bureau 1 x solidworks (total 2 seats).
- Couray Sheetmetal - Sheet metal fabrications, spray booths, dust & fume control - 1 x SolidWorks Office.
- Australian Tipping Systems - Hydraulic and pneumatic systems - 1 x SolidWorks.
- Co-operative Research Centre for Micro-Technology - 1 x SolidWorks (total 2 seats).
- Monash University - 1 x SolidWorks.

### New Zealand

- University of Otago (NZ) - 1 x SolidWorks.
- Open Polytech of New Zealand - 1 x SolidWorks.

- Future Products - 1 x SolidWorks Office.
- RX Plastics - 2 X SolidWorks.
- Kiwi Tech - 1 x SolidWorks.
- D-Tech - 1 x SolidWorks Office.
- Pacific Wire Technologies - 1 x SolidWorks Office.
- Patchell Industries - 1 x CosmosWorks Designer.
- Burroughs Pilcher Design - 1 x SolidWorks.
- Mulcahy Engineering - 1 x SolidWorks.
- Rakon - 1 x SolidWorks Office.
- BW Murdoch - 2 x Rhino.
- Carbines Engineering - 1 x SolidWorks.
- Flomax - 1 x SolidWorks Office Pro.
- Wellington Drive - 1 x SolidWorks.
- Interlock - 1 x CosmosWorks Professional.
- Vortex Engineering - 1 x SolidWorks Office.
- Edward Scholten - 1 x SolidWorks Office.
- Methvens - 2 x SolidWorks.
- Farm Services - 1 x SolidWorks Office Pro plus PDM client.
- Optim Group - 1 x SolidWorks Office.

### South Australia

- Instyle Furniture - Bedroom etc furniture 1 x SolidWorks.
- Antelco - Micro Irrigation equipment 1 x SolidWorks, 1 x SolidWorks Office.
- Hills Industries R&D - Consumer products, 1 x SolidWorks Office.
- CEA Technologies - Defence 1 x SolidWorks.
- Horwood Bagshaw - Agricultural equipment, 1 x SolidWorks Office.
- Dixon Asia Pacific - Pipe & hose fittings, 3 x SolidWorks Office.
- University of South Australia - School of Architecture and Design (Industrial Design) - expansion to 100 seats SolidWorks and Cosmos.

### Queensland

- Metal Storm - electronic ballistics technology x 1 SolidWorks.
- The Davey Group - facilitated engineering and augmented services 4 x SolidWorks.
- Comalco Aluminium - supplier of bauxite, alumina 3 x SolidWorks.
- Corbett Robotics - high technology robotics 1 x SolidWorks.
- Xstrata Copper - mining equipment 1 x SolidWorks.
- Ludowici Mineral Mineral Processing Equipment - MPE x 1.

- Bradnams Windows & Doors - architectural hardware 1 x SolidWorks.
- University of QLD.
- James Cook University.

### Western Australia

- Tasocs - Industrial Oil Coolers
- CAM system 2 1/2 and 3 axis MILLING
- Geographe Energy - Valves for Oil and Gas Industry - 1 x SolidWorks 1 x COSMOS FloWorks - SolidWorks
- PFP Technologies - Automation systems for steel fabrication - 2 x SolidWorks Office Pro. 3 x PDM/Works System
- AusDrill - Exploration Drilling Equipment - 1 x SolidWorks
- KENDOR Industries - Furniture Design - 1 x SolidWorks Office.
- AirDrill - Drilling Rigs - 1 x SolidWorks.
- SOLAHART - Solar Hot Water Systems additional licenses of SolidWorks OFFICE x 3
- Green Light Design - Industrial Design and Product Development - SolidWorks Office x 1
- Brian Rodgers - Cast Concrete Products 1 x SolidWorks.
- Guliford Grammar- Private Highschool - additional licenses x 20 EDU SolidWorks.
- South-East Metropolitan College of TAFE - additional licenses x 20 EDU SolidWorks.
- University of WA - ERADE Postgraduate Research Centre - x 10 EDU SolidWorks.
- Curtin University of Technology: Dept of Design additional licenses x 20 EDU SolidWorks.





by Sierk A. Bosman  
IT Manager Intercad

## A tip from the SW Knowledge Base

**Question** : What is "Hyper Threading" and does SolidWorks take advantage of it?

**Answer** : Hyper Threading is a way of taking some of the benefits of dual/multi processor machines available on single processors. There are hardware and OS requirements for Hyper Threading to work:

- Processor must be P4 3.06 GHz or higher, or Intel Xeon processors of any GHz rating.
- Need special motherboard
- Hyper threading must be enabled in BIOS
- Windows XP SP1 (This does NOT work in Windows 2000/NT - most things will run slower)

Does Hyper Threading make a noticeable performance difference for SolidWorks? No, not a large difference, but it does offer some benefits when multi-tasking on the machine (i.e. running SolidWorks concurrently with something else).

So if you are running SolidWorks as your primary application disabling Hyper Threading in the bios will prevent CPU cycles being reserved for other applications.

## A tip from 3Dlabs

**3Dlabs** claims first OpenGL shading language-supported CAD application

MILPITAS, California, December 10, 2003 - 3Dlabs Inc., Ltd., a leading innovator in professional visual processing, today announced that the Wildcat VP family of workstation graphics accelerators powers SolidWorks 2004, the first CAD application capable of real-time rendering with the OpenGL Shading Language. The new update to SolidWorks 2004, Service Pack 2 (SP2), and the application's RealView feature operate in concert with any Wildcat VP graphics card to leverage the expressive power of this high-level, open standard API that interactively models photorealistic material shaders. SolidWorks 2004 RealView running on a Wildcat VP graphics accelerator is capable of real-time styling and production-grade rendering that can drastically reduce the engineer's overall design time. The new Wildcat VP Acuity(tm) driver (version 3.01-0678) that supports the RealView feature is available free of charge at [www.3dlabs.com/drivers](http://www.3dlabs.com/drivers) <<http://www.3dlabs.com/drivers>> . 3Dlabs is a wholly owned subsidiary of Creative Technology Ltd.



"We decided to bring OpenGL Shading Language shaders to SolidWorks 2004 and work with 3Dlabs because it spear-headed the adoption of this revolutionary open standard," said Brian Houle, partner program manager for SolidWorks Corporation. "Now designers can unleash the power of Wildcat graphics on the most complex CAD projects, confident that tasks will be completed faster than before."

"Wildcat VP graphics accelerators provide SolidWorks 2004 users the ability to view models at an uncanny level of visual realism," said Jeff Little, director of marketing for 3Dlabs.

"Powered by Wildcat VP graphics and the OpenGL Shading Language, the RealView feature allows designers to interact with highly realistic material shaders and textures in real-time to deliver stunning, lifelike rendering capabilities while decreasing the development time and the

number of product reworks."

The OpenGL Shading Language is an industry standard developed by the OpenGL Architecture

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Review Board. It is a high-level, hardware independent C-like programming language that integrates seamlessly with OpenGL to enable application developers to deploy interactive, cinematic-quality rendering effects using advanced Visual Processor Units (VPUs). The new RealView feature in the SolidWorks 2004 SP2 allows users to easily create fully rendered images of SolidWorks 2004 models in real-time. For the first time, styling and production rendering becomes an integral function in the design workflow, which shortens the production process and decreases time-to-market.

For more information on SolidWorks 2004, please visit [www.solidworks.com/pages/partners/3Dlabs/3Dlabs.html](http://www.solidworks.com/pages/partners/3Dlabs/3Dlabs.html) <[\[works.com/pages/partners/3Dlabs/3Dlabs.html\]\(http://www.solidworks.com/pages/partners/3Dlabs/3Dlabs.html\)>](http://www.solid-</a></p>
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More information on 3Dlabs' award-winning Wildcat technology can be found at [www.3dlabs.com](http://www.3dlabs.com) <<http://www.3dlabs.com/>



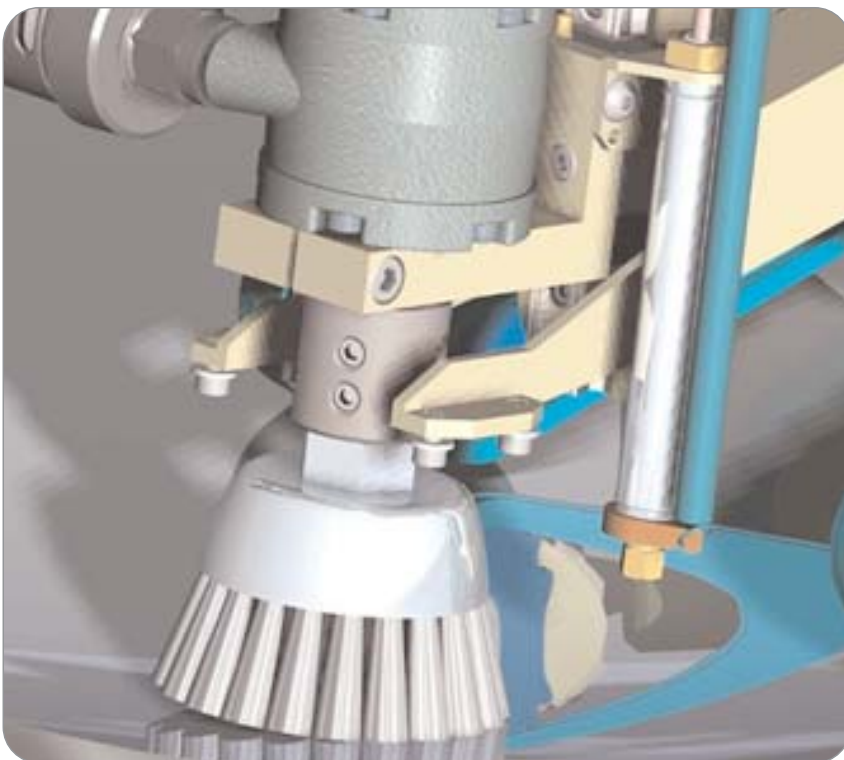
### About 3Dlabs

3Dlabs, a leading innovator in professional visual processing, supplies a broad range of graphics accelerators to Computer Aided Design (CAD), Digital Content Creation (DCC), and visual simulation professionals. Its award-winning Wildcat graphics solutions are available in industry-leading OEM workstations, in the channel through an international distributor/reseller net-

work, and directly to end-users at 3Dlabs' online store. For more information on 3Dlabs products, visit [www.3dlabs.com](http://www.3dlabs.com). 3Dlabs is a wholly owned subsidiary of Creative Technology Ltd.

### Requirements to enable RealView with your Wildcat VP graphics card:

- SolidWorks 2004 with SP2.1, if you have performed a custom install ensure that you have also installed the RealView shader files.
- Install the current Wildcat VP driver from [www.3dlabs.com](http://www.3dlabs.com) (<http://www.3dlabs.com> (3.01-0739 at time of writing) and set SolidWorks as the optimised OpenGL application from the 3Dlabs icon in your system tray, be sure to reboot when prompted. ■



## by Shane Preston

Technical Services Manager

Welcome again! These articles are a great opportunity to contact your technical support team, if you have any comments or suggestions please let us know.

### New Zealand

Toll Free: 0508 223 226  
support@intercad.co.nz

### Australia

Toll Free: 1800 633 701  
support@intercad.com.au

### In this edition we have:

1. Sheet Format & Drawing Templates Explained.
2. Subscription Support.
3. Custom Profiles for Weldments in SW 2004.

## Technical Tip - 1

### Sheet Format and Drawing Templates Explained:

by Alex Henry

Application Engineer  
Intercad

In SolidWorks one of the areas that can occasionally confuse users is the difference between sheet format and templates for drawings. This document helps explain the difference between the Drawing template and Sheet format. Further information can be found in SolidWorks HELP and the "SolidWorks Essentials: Drawings" course. As a general overview, SolidWorks allows the user to create custom templates.

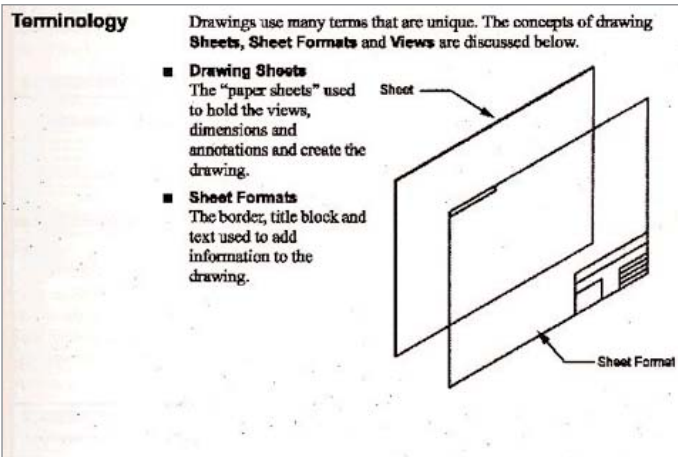


Fig. 1 Terminology

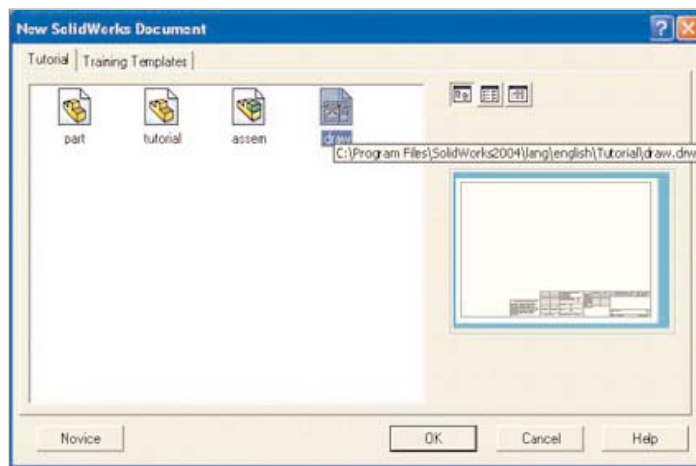


Fig. 2 New (Default) Drawing Template

In SolidWorks Parts this is the <filename>.prtdot file and Assemblies, the <filename>.asmdot file.

Assigning text size and font, arrow sizes, colours and materials etc is all part of this process.

A SolidWorks Drawing template stores the customisation of sheet size and border and also can include properties from the part/assembly file it is referencing. It also stores arrow sizes, font style etc. The SolidWorks Drawing template (<filename>.slddot)

consists of a drawing sheet and sheet format (<filename>.sldprt) (Fig. 1.).

The new drawing template allows the user to select a style and size of border, title block and details (sheet format) for the size sheet you wish to use. However, you may not want to do this every time you create a new drawing. You can customise drawing sheet formats to match your company's standard as the sheet formats provided with the SolidWorks software do not conform to any standard.

customise drawing sheet formats to match your company's standard as the sheet formats provided with the SolidWorks software do not conform to any standard.

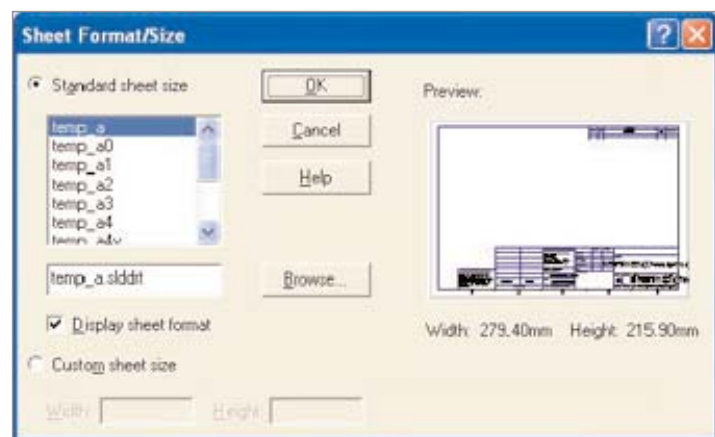


Fig. 3 Sheet Format Selection Box

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next page.



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## Technical Tip - 1

### Sheet Format and Drawing Templates Explained

As more templates are created more will be available in the "New SolidWorks Document" dialog box.

In this dialog box you can chose which sheet format to use for the sheet size specified.

SolidWorks has options you can set that opens the template you specify - containing drawing sheet and format - you can relate these to any templates folder. (Fig.4.)

By editing the sheet format (Fig.5.) you can link to various custom properties contained within your models or your own customised properties.

When you have opened the new drawing file, you can

edit the sheet format (Fig.5.) and add extra custom properties that can be defined either/or in the part/assembly file to be located in the drawing or SolidWorks custom properties.

Custom properties of drawing documents linked to fields in the system sheet formats are: CompanyName, CheckedBy,CheckedDate, DrawnBy, DrawnDate, EngineeringApproval, EngAppDate, ManufacturingApproval, MfgAppDate, QAApproval,QAAppDate. Fig.6 and 7 Shows some of the sheet properties that can be derived from a part or assembly file.

In summary: In SolidWorks a drawing template can be customised and saved to specify a drawing sheet size, and then the style of

border to be placed in it. Typically custom templates are used for each size of sheet (A3, A4 etc). Text and formatting is also contained within this template so that when the user has created the part/

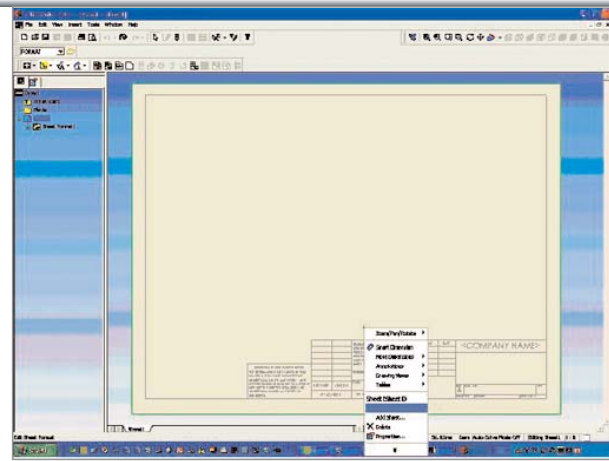


Fig.5 Editing the Sheet Format

assembly file, they can specify File> New> Drawing and select <Company Name>.A3 (for example) etc and know the page that will be selected is correct for their purposes. ■

Fig.6 Linked Properties

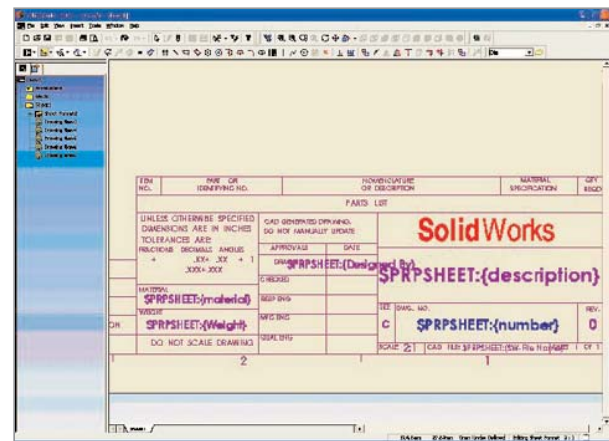


Fig.7 Property Selection

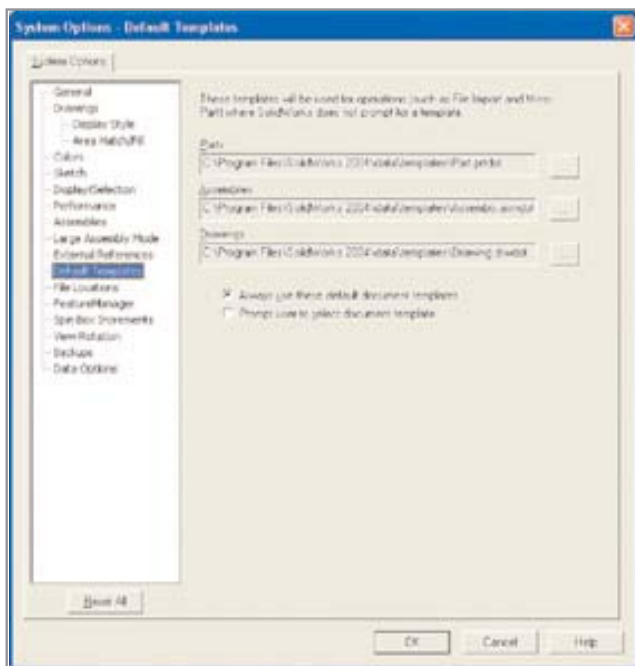
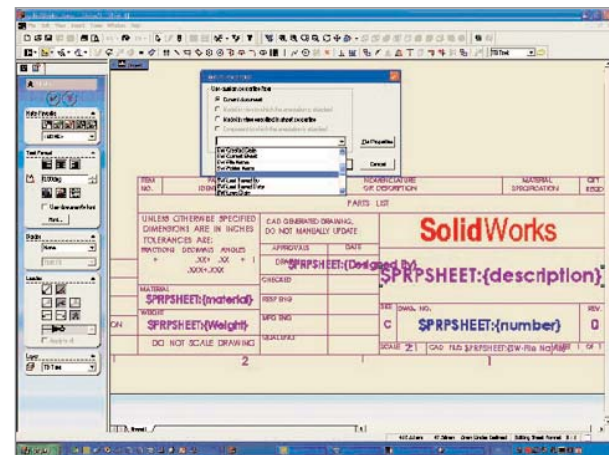


Fig.4 Default Templates location



## Intercad increases value to Subscription Support Customers

Intercad is pleased to announce an additional service to all Subscription Customers. We have created a Knowledge Base of support queries raised by Intercad customers. This Knowledge Base is available for all Subscription Service customers through the WebTicket interface on the Intercad website.

www.intercad.com.au or  
www.intercad.co.nz and  
go to the "Support" link



The Knowledge Base is an initiative taken to improve Intercad's Technical Support by more quickly providing answers to support queries. If someone else has already asked the question you have, it will be in the Knowledge Base.

There are currently over 1200 entries in the Knowledge Base covering all products supplied by Intercad. More entries are being added all the time.

Keyword searches can be used to locate answers to commonly asked questions.

The Knowledge Base is accessible 24 hours a day 7 days a week.

### Example Knowledge Base Entry:

#### Problem Description:

I need configuration name to show instead of the part name in a Bill of Materials,

how do I achieve this?

#### Problem Resolution:

In the part or subassembly document, Right-mouse click on the configuration(s) in the configuration manager, the Configuration Properties dialog box will appear.

There is the option for: "Part Number Displayed in Bill of Materials".

You can choose from 'Document Name', 'Configuration Name' or 'User Specified Name'.

The Intercad Knowledge Base increases the speed with which customers can access answers to Technical Support Questions.

#### Did you know?

? Subscription customers receive a 10% discount of any Intercad supplied Graphics Card.

? Subscription customers are entitled to a discounted Hands On What's New training course for each new release.

? Intercad Technical Bulletins are now contained in the quarterly Interactions newsletter. If you have missed previous editions please let us know.

'Intercad, the local suppliers and supporters of the SolidWorks range, have provided us with first class service. Their ongoing support of the user groups and regular training courses indicate they care about their customers, which means a lot with products as valuable and integral to our business as SolidWorks'.

**Morgan Drew - Director, Abuzz.**

#### SPECIAL NOTE:

Web Tickets and as a consequence the Knowledge Base are slow for some people, this is bug with the software we are using. We are waiting on the software writers to correct this problem. ■



## Technical Tip - 2

## Custom Profiles for Weldments in SW 2004:

by Stewart Nankivell

Training Manager  
Intercad NZ

A document to assist users in creating their own profiles to use with the 'Weldment' functionality in SolidWorks 2004.

The Weldment profiles supplied with SolidWorks 2004 are usually stored in the 'Program Files \SolidWorks\data\weldment profiles' directory. The files themselves contain Library features and therefore have the .sldlfp extension.

### Modifying an existing Profile:

The first and possibly easiest method to create custom Weldment profiles is to modify one of the existing profiles. To modify an existing profile:

1. Open an existing weldment profile from one of the SolidWorks supplied folders. (eg. \weldment profiles\iso\angle iron \25 x 25 x 4.sldlfp)

Fig. 1 Open an existing file.

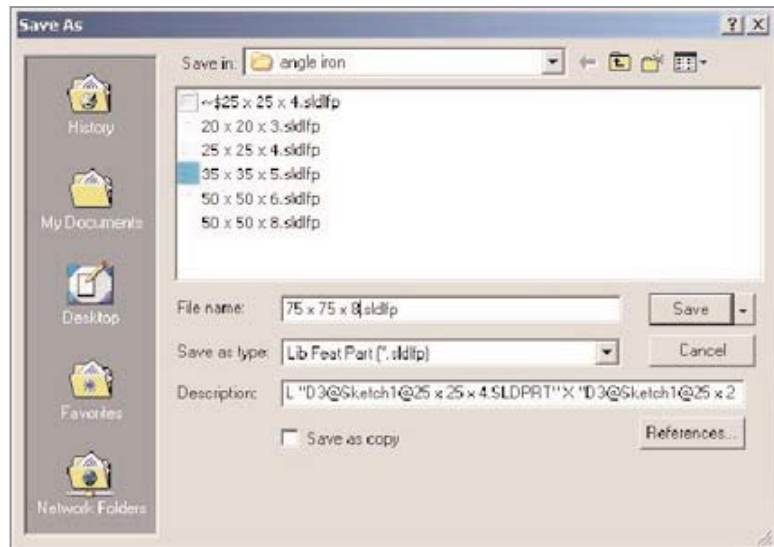


Fig. 2 Save As

2. Make the necessary changes to the profile by changing dimensions and adding any extra reference points required to help locate the profile.

75 x 8 if a larger angle iron section is required, see fig. 3.)

### NOTES:

\* By choosing an appropriate profile the description

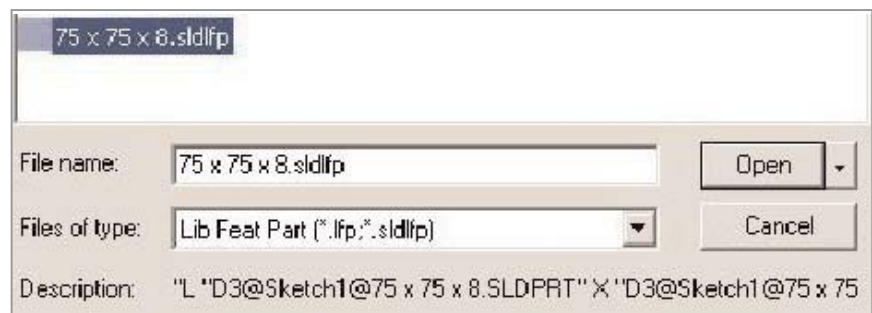


Fig. 3

3. Click File, Save As. The Save As dialog box appears.

4. From the Save as type list, select Lib Feat Part (\*.sldlfp). Enter a name and click Save. (eg. 75 x

will already be set to capture the dimensions of the section so you can modify the sizes and the description will update automatically. The description will appear in the 'Weldment Cut List' when used in a drawing.

\* By adding extra reference points in the profile sketch you will have more options when trying to place the section.

Continued  
next page.



## Creating a New Profile:

To create a weldment profile library feature, you first create a base extrude feature from the new profile, then make the profile sketch into the library feature. As noted already Library features have the .sldlfp extension.

**NOTE:** \* See notes in SolidWorks help files for more general information on library features.

To create a weldment profile library feature:

1. Open a new part, sketch a new profile, and create a base extrude feature.

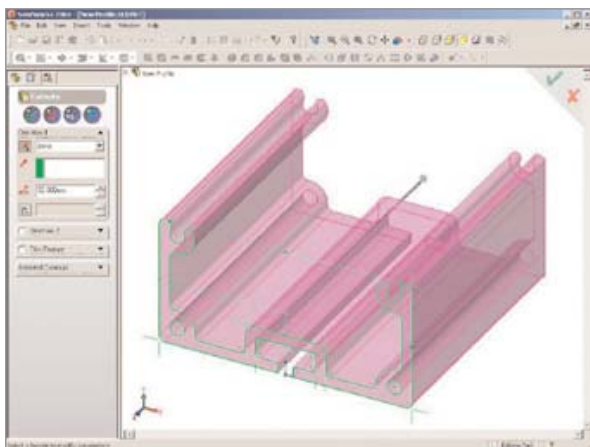


Fig. 1 Open a new part.

2. Select the sketch used to create the base features

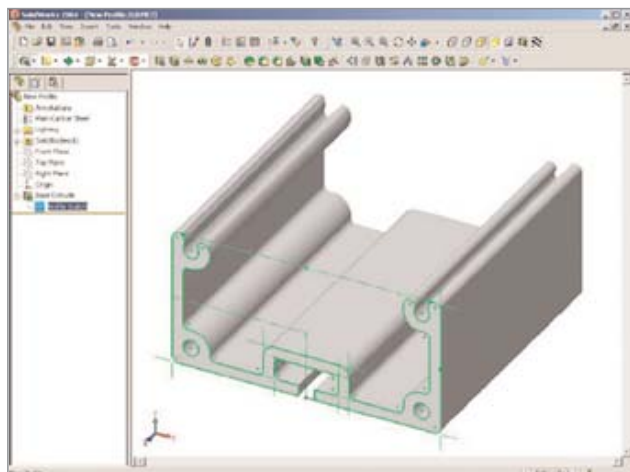


Fig. 2

as the weldment profile to be stored in the library feature.

3. Click File, Save As. The Save As dialog box appears.

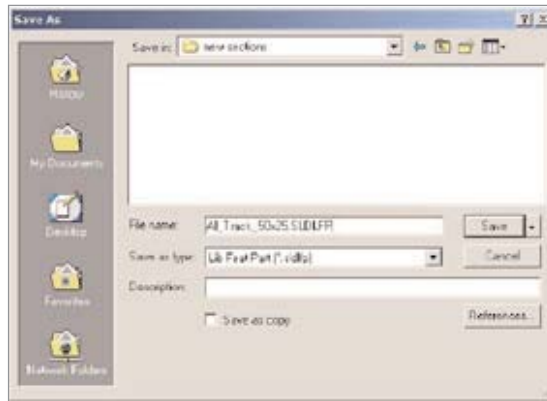


Fig. 3. Save As

4. From the Save as type list, select Lib Feat Part (\*.sldlfp). Enter a name and click Save. The part icon beside the part name in the FeatureManager design tree changes to the library feature icon, and the profile sketch is marked with a letter L.

5. Click File, Properties and select Custom. Select Description, enter a value and click OK.

tion so that it will update automatically if modified.

As stated previously the description that will appear in the 'Weldment Cut List' of the part in a drawing is the information entered into the 'File, Properties, Custom, Description' of the 'Library Feature Part' created for the profile. ■



Fig. 4.



Fig. 5. Properties.

**NOTE:** \* By selecting overall dimensions from the profile when entering the description, actual profile sizes will be linked to the descrip-