Ex-champion race car driver now designs high-performance cars instead of driving them

If it weren't for the 1970's oil crisis, Alan Mertens might be driving racing cars today – instead of designing them.

Before becoming an automotive engineer, Alan was a talented amateur race car driver, winning a major national championship in England.

When the fuel crisis caused his sponsor, Shell Oil, to pull its backing, Alan's racing days were over. But he had been bitten by the racing bug, and was bored by his job as a designer in the aerospace industry.

He quit his job and went to work for March Engineering, the biggest race car manufacturer in the world.

"I figured that since I couldn't drive cars any more, I might as well design them," says Alan.

A super car in the making

Born and raised in England, Alan is president of Galmer, Inc., a boutique design firm specializing in designing high-performance automobiles.

Race cars he has designed have been driven by Al Unser Jr. and Danny Sullivan. Alan has been responsible for 74 IndyCar wins, including six at the USA Indy 500.

Alan's current project is designing the Galmer Arbitrage GT for Thailand-based Cobra International Limited. His software: Autodesk Inventor.

The Galmer Arbitrage GT targets the "super car" market, where the sticker price ranges from $500,000 to $1 million. Competitors in the category include Ferrari, Lamborghini, Zonda, Saleen, and Noble.

Part of the design challenge is to produce an automobile with performance equivalent to the high-end models, but costing only $175,000 to $200,000. The low labor costs in Thailand help Cobra reduce the sticker price.

There are two ways Mertens can optimize the power-to-weight ratio. He can increase the power and reduce the weight.

His target weight for the Galmer Arbitrage GT is a mere 2,000 pounds. This light weight is achieved with a unique chassis. The chassis is fabricated from carbon fiber composite, which is five times stronger than steel.

Designing from the inside out

One of the keys to successful automotive design, says Mertens, is to design the car from the inside out. "Start with the chassis, which cocoons the driver, then work your way out to the engine, fuel tank, and other components," he advises.

The reason for starting with the interior and designing outward is to ensure that all components work together as the car is built up.

If you start on the outside, you risk having components not fit when you get to the interior (e.g., not enough room between the steering wheel and the driver's seat), which means you have to start over and change everything to fix it.

Autodesk Inventor helps Mertens visualize how the components work together. "It's a very easy to use, intuitive piece of software, and superb for mechanical component design," says Mertens.

Adds Mertens, "When you create a new part, you can do it in the assembly environment to see how it interacts with the rest of the car. You can also take it out of the assembly and view it as a separate entity."

The need for speed

Not only must the cars Martens designs be fast – the Galmer Arbitrage GT has a 500 horsepower engine that will take it from zero to 60 mph in under 3 seconds – but the designer has to be fast, too. The finished design is due by the end of this year.

"Race car design is a deadline-driven business," says Alan. "If we don't deliver on time, our client can't ask for the race date to be changed because his car isn't ready." Mertens says Autodesk Inventor gives him a tremendous advantage in projects with tight schedules.

"When I was an aerospace engineer in the UK, I was on a team to design a cast aluminum bulkhead," notes Martens. "It took four people three months. Here at Galmer, Inc., we recently designed a bell housing for a new road car. With Inventor, it took us just 5 hours."

Driven to succeed

Prototypes of the Galmer Arbitrage GT are scheduled to be manufactured in October 2007. Although Mertens doesn't race anymore, designing race cars fulfills a large part of his desire to be involved with fast cars. The rest of that fulfillment comes from the cars in his driveway.

"I'm a bit of a car freak," Alan cheerfully admits. "I spend way too much money on cars." His personal automobiles have included a Porsche, a Viper, and now, a BMW sports car. "But I'm too old to race," he admits with a sigh.

Renderings

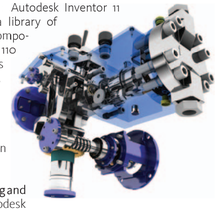
Seven good reasons to choose Autodesk Inventor® 11 for AutoCAD

1) **Moveable dimensions:** Autodesk Inventor 11 enables engineers to move dimensions from one drawing view to another. No need to delete dimensions and recreate new ones. You can also copy dimension properties (e.g., text style, precision, tolerance) from one dimension to another without editing the actual dimension style.

2) **Works with your existing DWG files:** A built-in DWG wizard makes it easy to import the DWG you need for your design. DWG data can be copied and pasted directly from AutoCAD to Autodesk Inventor.

3) **Ready-to-use shape templates:** Why draw common shapes from scratch? Autodesk Inventor 11 gives you a library of pre-drawn 3D shapes (rectangles, cones, rings) that you can cut and paste into your design. A simple dialog box enables you to quickly modify the length, width, and depth of the shape to fit your drawing.

4) **Extensive parts library:** Autodesk Inventor 11 users have access to a library of more than 26,000 components made by over 110 leading manufacturers including ABB, Mitsumi, and Rockwell. By not having to model these purchased parts, you can spend more time focusing on your own designs.



5) **Photo-realistic rendering and animation:** With Autodesk Inventor, you can create computer drawings so realistic that they eliminate the need to build a physical model or mockup. These "photo-realistic" 3D computer models help non-designers understand the design concept. You can even add animation to demonstrate the operation of a machine or system.

6) **Bill of materials:** The software generates a complete and accurate bill of materials based on your 3D assembly model. As you add, subtract, or substitute parts; the bill of materials is automatically updated. With a current and correct bill of materials, manufacturing can order the right parts and materials to build the product.

7) **Facilitates design collaboration:** Your internal and external customers can download a free Autodesk DWV viewer enabling them to review design data from multiple sources. Both 2D drawings and 3D models can be included in the same file along with dimensions, center of gravity, mass, volume, and other parametric data.

Advanced SOLUTIONS
Since 1987

Advanced Solutions launches first Autodesk Manufacturing User's Group (AMUG) in Cincinnati

Advanced Solutions launched the world's first Autodesk Manufacturing User's Group last month in Cincinnati, Ohio.

The Cincinnati Autodesk Manufacturing User's Group is sponsored by Advanced Solutions and sanctioned by Autodesk User Group International (AUGI), which serves over 60,000 Autodesk users worldwide.

More than two-dozen members attend quarterly meetings to share best practices, software tips, and innovative solutions to tricky design challenges. In addition to quarterly meetings, the group offers a members-only Web page, a newsletter, resources, networking opportunities, and more. There is no cost to attend the meetings.

"Our goal is to build a community of Autodesk users who share ideas on how to use the new release of Autodesk Inventor to help them design better and faster," says Chris Lavenson, Marketing Manager, Advanced Solutions.

Scott Thompson, a senior mechanical designer with Federal Equipment Company in Cincinnati, OH is a founding member of the Cincinnati Autodesk Manufacturing User's Group and its Chairman.

"Inventor users in the Cincinnati area are scattered to the four winds," says Scott. "These user group meetings give us the opportunity to come together and share our experiences using Inventor in the manufacturing environment to improve our lives, our products, and our knowledge of the software."

"Everybody was very open," Scott says of the first meeting. "We openly discussed topics. Questions flowed freely and were addressed by whichever member had the answer." Scott has used Inventor in his design work for 6 years. His current project at Federal is to design an advanced weapons elevator using linear synchronous motors instead of cables for the U.S. Navy's next-generation of air craft carrier.

"Inventor's collaboration and 3D capabilities enable us to share information between our local designers here and the design group at the shipyard," says Scott. "They are able to take a 3D model of our elevator and place it into a larger 3D model of the ship."

Scott invites all design professionals in manufacturing in the Cincinnati area to come to the next meeting. Meeting announcements are posted on the group's Web site at:

http://chapters.augi.com/amug/cincinnati/

Advanced Solutions fully funds the Cincinnati Group and has set aside money to help users in other cities, in which the company has offices, to start their own user groups.

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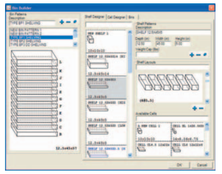
Renderings

Slot3D™

IDS Engineering Announces Slot3D 2007



LOUISVILLE, KENTUCKY: IDS Engineering, LLC., a full service Industrial Engineering and Software company, announces the latest release of its economic based warehouse slotting software, Slot3D™ 2007. This software represents the FIRST warehouse slotting software to have an AutoCAD® graphical engine embedded into its design. With headquarters in Louisville, KY, IDS Engineering is emerging as a recognized leader for slotting optimization software.

President & CEO Michael Golway, P.E., said "We are excited about this great new product release and look forward to the value it will create for our customers and consulting partners in the warehouse and distribution industry. Slot3D™ 2007 brings together the powerful economic based algorithms of our slotting software with an embedded AutoCAD® engine (the industry's most widely used graphics program for warehouse design)."

This product release represents a strategic initiative for the company to integrate intelligent data centric optimization models with 3D facility management and design tools.

Working closely with Autodesk, Inc., as an Autodesk® Authorized OEM Partner, IDS Engineering has created a modeling tool that will significantly enhance both the warehouse design process and warehouse productivity.

Golway went on to say, "We continue to enjoy and value our partnership with Autodesk®. Together our technologies deliver innovative solutions for our customers that result in fast return on investments."

About IDS Engineering, LLC.

Since 1998, IDS Engineering LLC., a privately held company, has focused its business model on delivering Industrial Engineering and Software Solutions to a variety of different businesses. As a full service Professionally Licensed Engineering Firm, IDS Engineering offers Engineering and Software Solutions designed to increase the client's revenue, reduce operating costs, and improve their efficiency.

ids engineering

As an Authorized OEM Autodesk® Partner, IDS Engineering meets the rigorous Autodesk® standards for developing software solutions built on the Autodesk® platform of world renowned products. With a talented staff of professionals averaging 20 plus years of experience in the industry, IDS Engineering has developed a rich understanding and capability on how to deliver solutions that meet customer needs. For additional information about IDS Engineering, LLC, please visit www.idsengineering.com or www.slot3dsoftware.com.

IDS Engineering, 1717 Alliant Avenue, Suite 12, Louisville, KY 40299
1-866-657-2600 | 1-502-657-2600 | 1-502-657-2604 (FAX)

Advanced Solutions Seeks Excellent Sales Associate

Advanced Solutions is looking for experienced technical solutions Account Managers to join our team. Key skills include:

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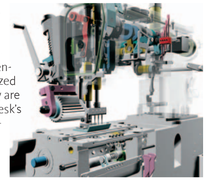
- Understanding of Manufacturing Process

Please email resume to careers@advancedsolutionsonline.com or visit www.advsolinc.com/employment.jsp for more information.

Autodesk authorizes Advanced Solutions training facilities as Premier Authorized Training Centers

Advanced Solutions training centers (eight facilities that train design engineers in Autodesk software) have been authorized by Autodesk as Premier Authorized Training Centers (ATCs) – their highest designation. The Advanced Solution ATC's are located in Louisville, Cincinnati, Columbus, Lexington, Fort Wayne, Evansville, Indianapolis, and Detroit.



The Advanced Solutions ATC's are designated as specializing in each of four industry segments: building, manufacturing, infrastructure, and general/platform. All are authorized as "2007-ready," meaning they are prepared to teach on Autodesk's 2007 product line which includes AutoCAD, Inventor, Revit, and Civil 3D.

To become an authorized Premier ATC, Advanced Solutions had to meet Autodesk's stringent criteria: laboratories are required to be equipped with the latest computers, while instructors must pass Autodesk product exams to verify their product knowledge.

"Premier ATC authorization is like the Good Housekeeping Seal of Approval for Autodesk training facilities," says Norb Howell, Chief Technology Officer, Advanced Solutions. "Autodesk created the Premier ATC designation to indicate to customers that a training facility has met its quality standards for excellence in training."

Upon completion of training, students can post their evaluations online giving both Autodesk and Advanced Solutions a way to monitor training quality and student satisfaction. In addition, as a Premier ATC, Advanced Solutions can administer the Autodesk Certified Expert Exams to its students.

Registered architects can be awarded Continuing Education credits (CEUs) for courses completed. All students are awarded certificates of completion documenting the training they have received. Advanced Solutions has been providing Autodesk training for more than two decades. The training staff has 12 full-time instructors, and Howell says more instructors will be added.

The company has trained close to 10,000 students – from more than a thousand organizations. Classes range from one to five days, with class size limited to 12 students. Tuition averages $350 a day. Students get a free course reference guide, and can call or e-mail their instructor with questions even after the class is over.

Advanced SOLUTIONS Since 1987

Since 1987, Advanced Solutions, Inc. has delivered and supported Autodesk software solutions to more than 10,000 customers. As an Authorized Value Added Reseller (VAR), Advanced Solutions offers training, implementation, and support for all Autodesk software products.

With more than 7 million registered users worldwide, Autodesk is a leading providers of computer-aided design (CAD) software for manufacturing, building, infrastructure, media, entertainment, and other applications. Inventor expands the capabilities of their best-selling AutoCAD 2D design and drafting software, enabling engineers to create models and simulations in 3D.

For details on Advanced Solutions training classes, call toll-free 1-877-GET-ASI-1 or go to www.advancedsolutionsonline.com/training.jsp.

Advanced Solutions Donates $300,000 of Autodesk Software to the University of Louisville

Advanced Solutions, a Louisville-based value-added reseller (VAR) of Autodesk software, has donated 30 Autodesk Inventor Pro licenses valued at nearly $300,000, to the University of Louisville.

Autodesk Inventor Pro expands the capabilities of the best-selling AutoCAD 2D design and drafting software, enabling engineers to create models and simulations in 3D. The donated software will be used in a variety of courses to teach disciplines ranging from factory layout to designing ergonomic assist devices.

"Inventor works on top of AutoCAD, giving our students advanced features like the ability to simulate the movement and interaction of 3D components," says Dr. John S. Usher, Professor and Chairman of the Department of Industrial Engineering at the University of Louisville. "Students will be able to design a product, or even a large system, and then see it in motion to determine if it works as they envisioned."

The University of Louisville is the alma mater of Advanced Solutions President and CEO Michael Golway, who holds a BS in Engineering Sciences and a Masters of Engineering in Industrial Design from the university.

"The University of Louisville was a wonderful place to learn engineering design, and I owe a lot to the education I received as an undergraduate and graduate student," says Golway. He is a recipient of the University of Louisville's Research Achievement Award and serves on the Alumni Board of the Engineering Graduate School. "With this gift, I am able to give something back to the faculty and students."

Mr. Golway is a licensed professional engineer in Kentucky and the recipient of the Business First Forty Under 40 Award, as well as an Outstanding Young Engineer Award. He is a member of the Institute of Industrial Engineers and the National Society of Professional Engineers. Before becoming president of Advanced Solutions, Mr. Golway worked as a consultant using AutoCAD for plant layout and design.

For more information on implementing Autodesk software in your organization, call Advanced Solutions toll-free 1-877-GET-ASI-1 or go to www.advancedsolutionsonline.com.

Renderings

Sinclair Community College students "AIM" higher with help from Autodesk

In today's computer-driven world, engineering graduates who are proficient in Autodesk tools have an immediate competitive advantage in the job market.

That is an advantage Sinclair Community College (SCC) gives its engineering students through the college's Advanced Integrated Manufacturing (AIM) Center.

Run by David Dilley, Manager of Industry Services Group, the AIM Center is equipped with state-of-the-art machinery including a wire EDM; 5-axis, horizontal, and vertical machining centers; coordinate measuring machines, rapid prototyping machines, an injection molder, an extruder, and metal and ceramic electric injection machines. There's also a computer lab where students can practice their CAD/CAM skills.

Professor Tom Singer is the Autodesk specialist in SCC's Engineering Design Department. He notes an increasing demand for qualified people who know how to use Autodesk Inventor, which has been Autodesk's best-selling package for the past 5 years.

"Our program is all about providing the tools and skills that are used in an engineering design setting," says Singer. "Knowing one of the parametric design modelers well is important for placement into a career. We start our students off on Inventor, because they are already familiar with the Autodesk product line, especially AutoCAD."

Incorporating Inventor into the SCC engineering design curriculum helps "keep our students marketable to employers," says Singer.

SCC students intern for Advanced Solutions clients

In one project funded by the National Science Foundation, Singer and his department are training other college and university faculty in the use of rapid prototyping equipment and collaborative communications tools. As part of this training, participants use Productstream – Autodesk's engineering change orders (ECO) solution – to make design changes. Autodesk Streamline enables team members to remotely share project files.

According to Brian Chamberlin, Senior Account Manager for Advanced Solutions, SCC has also received grants from Autodesk to promote use of the company's software in Ohio. "We have arranged cooperative programs in which SCC students are given design internships with Advanced Solutions clients in the Cincinnati area," says Chamberlin. In addition, Advanced Solutions offers SCC's engineering faculty training on all new Autodesk product lines. Cincinnati manufacturing companies interested in hiring SCC students through the co-op program can call Brian Chamberlin at 513-769-9901, ext. 1301.

New Dayton training center

Through a cooperative agreement, Advanced Solutions now conducts classes and free workshops for their commercial clients in the Dayton area. The upcoming training schedule can be found at www.advancedsolutionsonline.com.

SCC also participates in Project Lead the Way, a national program that brings engineering disciplines into the high school curriculum. Teachers at more than 70 schools in Ohio have already been trained at SCC in Inventor and Revit. These teachers can now teach their students how to use 3D modeling software as early as freshmen year.

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