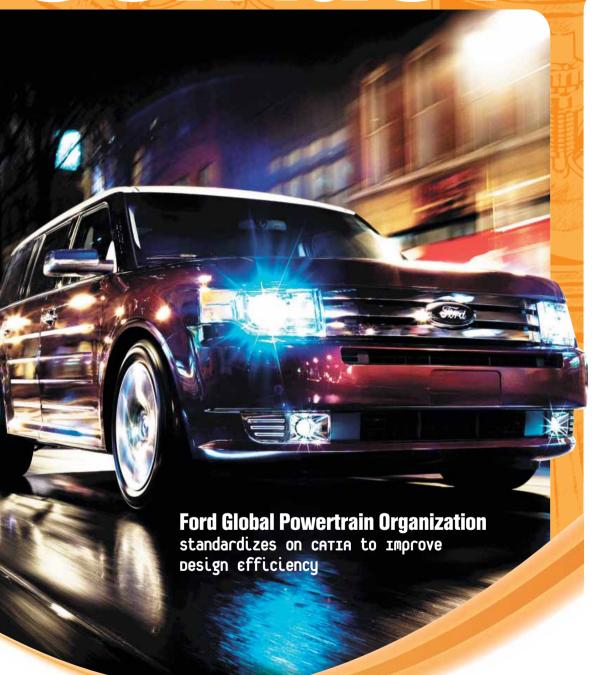
The Americas PLM Magazine





INDUSTRIAL EQUIPMENT, FEATURING LANGEN PACKAGING

Powering Manufacturers with PLM

Page 6



URBAN A&OArchitecture firm wins high-profile projects with CATIA

Page 10



GID Six-person firm helps inventors think big with DS PLM Page 20





Editorial



MAKE TOUGH TIMES LESS CHALLENGING WITH PLM

The global economy in 2009 is tough and getting tougher. But not every company will suffer – some will *emerge with advantage*, coming out of the recession in a stronger position than they entered it.

How? By doing a better job than the competition in helping their customers succeed.

If you're reading this magazine, chances are you've been working for years to put your company in just such an enviable position. You recognize that when you boil it all down, Product Lifecycle Management helps users transform the way they do business and achieve competitive advantage.

PLM lets you bid faster and more accurately by allowing you to quickly model your proposal based on what you've done in the past, even on custom orders, as Langen Packaging (Page 8) does. Because you've already designed the product *virtually*, you gain the confidence to bid aggressively, secure in the knowledge you can hold your margins. Best of all, you help customers buy aggressively, confident in your ability to deliver as promised. Consider GID (Page 20); this six-person company has doubled its margins to 20-25% since adopting PLM.

PLM also makes you nimble. **Ford Powertrain (Page 14)** has cut 11 days off the time required for each iteration of its new engines since adopting CATIA, while improving performance and quality. **Urban A&O (Page 10)** uses PLM to accept difficult architectural design jobs its competitors can't – dazzling its customers and its industry.

But PLM not only helps build better offerings faster and cheaper; it also helps you decide *which* offerings to pursue, delivering lifelike experiences that put virtual products in front of real prospects *before* you decide which ones to develop. Best of all, with more than 25 years in business, you can invest in DS PLM with confidence Dassault Systèmes will be here, unflagging in its commitment to develop technology for today and tomorrow.

To really see PLM in motion, check out our new interactive edition at www.3ds.com/contactmag-northamerica. With embedded video clips and AVIs, plus audio interviews with our featured customers, *Contact mag Interactive* lets you see and hear what we mean like never before. Also note our new "green" print edition. It bears the seal of the Forest Stewardship Council, indicating that the magazine is printed on paper containing recycled content and that new content came from responsibly managed forests.

Just two more ways we're working to make *Contact mag* serve you – and the planet – better. Enjoy!

KATHIE JOHNSON

Vice President of Marketing Dassault Systèmes Americas

Americas

ds digest

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Products with a Mixed Sources label support the development of responsible forest management worldwide.

ds digest

HEAR DS LIVE AND IN PERSON AT CONFERENCES THIS SPRING

DS customers and executives will have the opportunity to hear DS live and in person at a number of spring events, including the Apparel Tech West Conference, COE and SAMPE.

Dassault Systèmes is a Gold Sponsor of the 2009 Apparel Tech West Conference March 24 in Irvine, California, A representative of ENOVIA will deliver a 30-minute technology presentation. For more details on the event, please visit www.apparelmag.com

Rani Richardson of the DS CATIA Composites Center will speak May 15 at SAMPE in Baltimore on "From Simple Black Metal to Optimal Use of Composites," reviewing the benefits of adopting a complete set of process-oriented solutions to design, simulate, and manufacture composite parts on a single virtual platform. For details, visit www.sampe. org/events/2009Baltimore.aspx Richardson also will co-present with Steve Dostert of Boeing at COE April 19-22 in Seattle on "Boeing 787 and Composites Manufacturing." For details, please visit www.coe.org

For a complete listing of DS events in the US and Canada, please visit: www.3ds.com/company/regional-spotlights/north-america

80 PERCENT OF NEW CARS AT DETROIT AUTO SHOW DESIGNED WITH CATIA

CATIA, the Dassault Systèmes solution for virtual design, was used in the development of more than 80 percent of the 24 introductory and concept vehicles making their world debut at the 2009 North American International Auto Show. CATIA also was used in the design of all NAIAS 2009 North American Car of the Year and 2009 North American Truck of the Year finalists, including the winner, the Ford F-150.



With its knowledgeware capability, CATIA frees engineering time to invest in innovation. Studies indicate a strong correlation between a company's ability to leverage its knowledge for new uses and its ability to innovate. Today, many of the automakers across the world use Dassault Systèmes PLM

solutions, including CATIA, DELMIA, ENOVIA, SIMULIA and 3DVIA, to develop and optimize vehicle design and manufacturing processes in the virtual world in a shorter time at a reduced cost.

TUV RHEINLAND LEVERAGES DS V6 FOR COMPLIANCE

TUV Rheinland Group, a leader in product testing and assessment services, has selected ENOVIA V6 PLM solutions to launch an integrated compliance portal for customers.

The portal provides TUV's customers with tools to reduce costs and minimize time to market by evaluating material and regulatory compliance early in the product development lifecycle - which can also be extended collaborate more efficiently within ENOVIA's single intellectual property to the value chain for suppliers and OEMs.

customers collect, integrate, analyze and report a product's environmental

compliance throughout its development, ENOVIA's Engineering Central and Library Central will help TUV improve cross-functional and regional collaboration while managing bill of material capabilities and accelerating product development and delivery through intellectual property reuse.

EADS RENEWS COMMITMENT TO IBM AND DS PLM WORLDWIDE

EADS, the company behind Airbus commercial aircraft, has partnered with IBM and Dassault Systèmes to streamline its product design and



manufacturing processes and make key product information more accessible to suppliers and partners worldwide.

EADS will integrate solutions including product design (CATIA), digital manufacturing (DELMIA) and collaborative solutions (ENOVIA VPM) into EADS' PLM processes. More sophisticated products rely on deeper integration among the mechanical, electrical and software components of product development. Especially when components of an aircraft are made in different locations, an OEM's ability to share reliable data and design plans with its global suppliers becomes critical.

ISCAR ADDS ENOVIA SMARTEAM TO SUPPORT COLLABORATIVE PROCESSES

ISCAR, a worldwide supplier of precision carbide metal-working tools. has chosen ENOVIA SmarTeam and CATIA to enable its users from engineering to manufacturing to participate in collaborative product development processes.

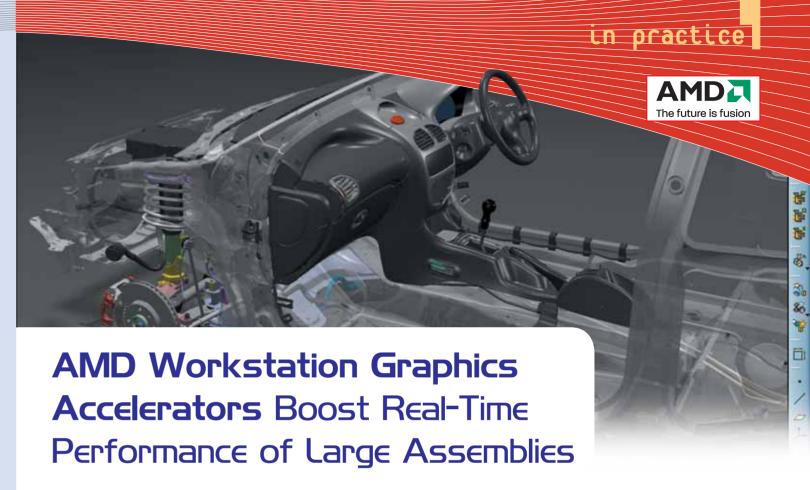
ISCAR is leveraging its DS PLM solution to accelerate design cycles and enhance product quality by improving management of its rich 3D design data and streamlining design approvals.

"By expanding our 3D design solution to gain greater control and efficiency, we shorten our design cycles and improve product quality by closing the product development loop through to integrated downstream manufacturing processes," said Moshe Rudko, Manager, Engineering Information Technology division, ISCAR.

NOVERO CHOOSES ENOVIA V6 PLM TO STREAMLINE DESIGN COMPLEXITY

novero GmbH, a leading provider of connectivity solutions for the automotive industry, has selected the ENOVIA V6 PLM solution to manage key design applications and product development processes and integrate with existing IT systems.

Established in 2008 as a spinoff from Nokia Automotive, novero is focused on delivering high-speed cellular and multimedia solutions for a number of the world's leading automotive manufacturers. The ENOVIA Designer Central solution will enable novero's designers to manage information, including mechanical and electrical data from CATIA, and (IP) reference, novero will also deploy the ENOVIA Engineering Central solution to eliminate the traditional process and data communication TUV's new portal leverages ENOVIA Materials Compliance Central to let barriers common between the mechanical, electrical and software engineering disciplines.





Dassault Systèmes PLM users on CATIA V5 Release 18 SP4 or newer can now increase the real-time performance of large

assemblies with the ATI FireGL™ and the new ATI FirePro™ workstation graphics accelerators from AMD. New feature sets and drivers, now available in CATIA and AMD workstation graphics accelerators, speed processing time by as much as 100 percent and make it possible to load larger models faster than ever before.

The trick lies in turning on the special features of new releases of CATIA V5. coupled with the power of the

ATI FireGL and the new ATI FirePro workstation graphics accelerators, to move raw geometry processing power from the CPU to the Graphics Processing Unit (GPU). Once data is loaded and stored on these AMD workstation graphics accelerators, it can be processed there locally, eliminating the need to move data back and forth as the geometry changes. This not only helps save time, but also frees up workstation resources such as system memory.

NEW FEATURES AND DRIVERS BOOST CATIA PERFORMANCE

Dassault Systèmes, working with AMD, leveraged the new technologies introduced with OpenGL 2.1 to develop an innovative graphics implementation that streamlines the pipeline between the CATIA application and the GPU. An oversized frame buffer on the graphics card enables better user productivity while allowing users to work with larger models and data sets, especially when using shading, textures and real-time photorealistic rendering.

Taking advantage of these technology improvements in CATIA requires V5R18 SP4 or better, plus a professional graphics card that supports OpenGL 2.1. All of AMD's ATI FireGL and ATI FirePro workstation graphics accelerators introduced in the past two vears meet this requirement.

If your system meets the requirements outlined above, you can enable these technologies with no additional hardware investment. For support in how to access this technology in your qualifying DS/ATI environment, please contact AMD, Dassault Systèmes or your DS value-added reseller.

Experience the difference at:

http://ati.amd.com/products/workstation/ VBO audio/with audio controller.swf

For more information:

http://ati.amd.com/products/workstation/ catia.html

PLM Solutions Power Industrial Equipment Manufacturers

Design and manufacturing of modern industrial products is inherently complex. As product variation increases and suppliers assume greater design and manufacturing responsibility, estimating total production costs becomes more difficult. Yet companies must meet customer demands and protect profit margins - especially difficult challenges in a slow economy.



Product Lifecycle Management (PLM) is a proven strategy for thriving in tough markets, making companies more effective, innovative and successful. Better yet, powerful Dassault Systèmes PLM solutions - including CATIA for virtual product design, DELMIA for virtual production, ENOVIA for global collaborative lifecycle management, SIMULIA for virtual testing and 3DVIA for online lifelike experience – are now available to companies of all sizes.

With PLM solutions, small- and mediumsized businesses can be more successful at all stages of the industrial equipment industry: bidding, design and engineering, manufacturing and assembly, and implementation and maintenance.

IMPROVED BIDDING

The best bid addresses customer requirements, ensures product quality and protects profit margins by anticipating and addressing key challenges more effectively than the competition.

The more detailed your bid, the more confidence customers have in your promise. The DS PLM solution for Industrial Equipment helps to quickly create and manage more concept variants by reusing intellectual

property. Templates and catalogs make CAD data, bills of material (BOMs), and

simulation results readily available for developing and comparing multiple configurations quickly, accurately



and inexpensively, and helps ensure accurate pricing. Communication using lifelike animated 3D models quickly demonstrates that a product meets customer expectations and can be produced as bid.

PLM also improves collaboration, helping to refine concepts faster with fewer late-cycle glitches. The bottom line: faster, more detailed concept modeling empowered by fully informed stakeholders with real-time access to product development information. PLM allows companies to accurately assess requirements and costs before bidding, delivering more confidence in a project's manufacturability and profitability.

DESIGN EXCELLENCE

Product complexity can contribute to design inconsistencies, delays and poor quality that erode margins and customer satisfaction. DS PLM facilitates design and engineering collaboration and task coordination,





feature

With PLM solutions for the mid-market, small- and medium-sized businesses can be more successful competing at all stages of the industrial equipment industry: bidding, design and engineering, manufacturing and assembly, and implementation and maintenance.



increasing accuracy of new designs or product variants. Intelligent design templates help standardize

parts to better leverage purchasing power. Decreased design time and complexity improve manufacturability and profitability. DS PLM also efficiently handles the large assemblies typical of the industrial equipment industry, with powerful kinematics to detect clashes, tolerancing to help lower the price of components. and fully integrated, industry-specific solutions from hundreds of software development partners to meet specialized

DS PLM provides an integrated system for design, analysis and manufacturing to support smooth transitions from 2D to 3D, and from design to analysis and tooling. The DS simulation portfolio encompasses finite element methods and advanced non-linear analysis. By enabling collaboration between designers and analysis engineers, DS PLM accelerates performancebased design decisions and reduces the need for costly and time-consuming physical prototypes and testing.

A DS PLM configuration management capability enables industrial equipment companies to easily manage alternate designs or build new designs on the data from previous projects. Coupled with workflow and shared catalogs, configuration management enables clear communication of changes and reduces the risk of latecycle errors.

DIGITAL MANUFACTURING

During manufacturing planning, innumerable elements must be stringently coordinated and executed to stay on time and budget. Interconnected activities throughout manufacturing facilities must be carefully coordinated to achieve the safest, fastest, and most optimal sequence.

The fully integrated DS PLM environment supports Design-for-Manufacturing to concurrently optimize design and manufacturing processes. Planning, scheduling, sequencing, Quality Analysis (Q/A) simulation, and virtual commissioning of digital manufacturing can be defined to reduce or eliminate costly clashes that otherwise might go undetected until installation.

Digital manufacturing helps detect and eliminate mechanical collisions, optimize machine cycles and maximize resource utilization. DELMIA Automation bridges the gap between mechanical and automation engineering, allowing users to leverage virtual models and explore "what if?"



scenarios. DS PLM significantly reduces product launch time by facilitating testing, validation, and

debugging of systems before physical commissioning.

LIFETIME VALUE

Customers want to maximize return on investment for the full life of a product. A turnkey solution that includes product,

installation, operational and maintenance services ensures ongoing market success and a long-term flow of revenues.

The fully integrated DS PLM environment supports Design-for-Maintainability, optimizing design, installation, operation and maintenance processes. Designing with maintenance in mind also minimizes the cost of service after the sale and the support time involved in warranty work.

Design models can be leveraged to directly create 3D-based product documentation illustrates

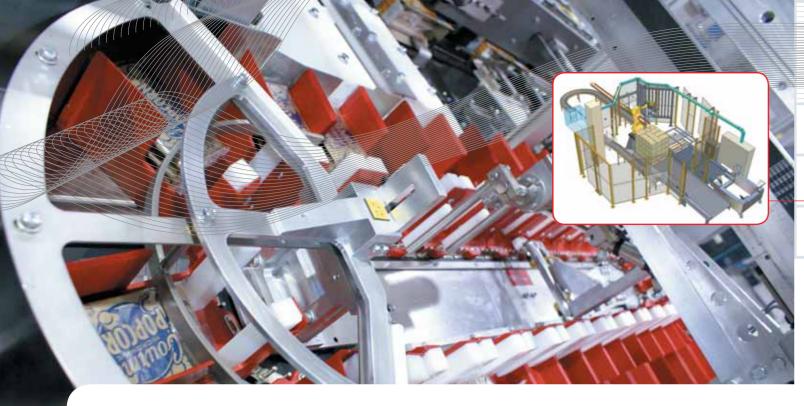


detailed operational and maintenance processes. Easy-to-follow instructions minimize training time and can be communicated entirely in 3D, eliminating text and the high cost of foreign-language translations. Functionality to identify spare or alternate parts early in the development cycle helps ensure critical parts are always on hand. All of these capabilities increase your value-add, helping to ensure repeat business.

For smaller companies, success demands the ability to deliver new and innovative strategies. Prepackaged PLM solutions for the mid-market from Dassault Systèmes enable rapid implementation, higher margins and faster return on investment.

For more information:

www.3ds.com/solutions/industrialequipment/overview



Langen Packaging Customizes Products with ENOVIA SmarTeam and Microsoft

SmarTeam gives us the ability to retain and track the kind of customer information that gives us a competitive advantage.

Mirek Tokarz, Director of Technology Development, Langen Packaging



Langen Packaging Inc. of Ontario, Canada, manufactures highly customized, durable machinery used to package products that range from food and durable goods to cosmetics, paper, pharmaceuticals and more.

To build made-to-order equipment, Langen Packaging needed a robust data engine to help it start fast and go the distance for its customers. Starting fast means responding quickly to new customer requests with accurate quotes and proposals that build off existing designs, while going the distance requires the ability to provide long-term service. This involves maintaining – sometimes over a span of 20 years or more – updated knowledge of a machine's evolving configuration in the field.

ENOVIA SmarTeam, coupled with the Microsoft platform and Windows® operating system, answers Langen Packaging's needs. By replacing years of custom solution development with out-of-the box functionality, the company is now poised for growth.

ADDING VALUE WITH MICROSOFT AND WINDOWS

Because ENOVIA SmarTeam operates on the Microsoft platform, information from a broad range of sources, including Microsoft® Office applications such as Word and Excel, can be stored together with product designs and proposals. This helps ensure all details of a project are organized and stored together for future reference.

What's more, the flexibility and commonality of the Microsoft platform has enabled Langen Packaging to continually expand the use of ENOVIA SmarTeam into new areas of the business. "SQL Server® 2005 does what it is supposed to without us really having to worry about its maintenance," explains Mirek Tokarz, Director of Technology Development. "It just works. Because of its wide use by so many companies, it also is easier to find support expertise when compared to other database platforms."

Langen Packaging has even integrated ENOVIA SmarTeam with Microsoft Outlook® 2003, which allows it to capture project-critical emails. Those emails, including attachments, can be stored and linked directly to projects, saving time and making





feature



Ascending Solutions

When we call on AscendBridge, we have someone brilliant sitting in our building, helping us out, within a few hours. That is very important because we have put ENOVIA SmarTeam totally in control of our business.

Mirek Tokarz, Director of Technology Development, Langen Packaging

associated documents readily accessible for future use and quick searches.

AFTER-SALE SERVICE EASIER WITH STRONG BOM TRACKING

With ENOVIA SmarTeam, Langen Packaging is well equipped to handle changes in the field. "If our Aftermarket group needs to introduce changes to a piece of equipment in the field, their starting base is a clean bill of material (BOM)," Tokarz explains. "This BOM can be revised and released back to manufacturing, and when the cycle is done, we are left with a revision of the BOM that represents what's in the field."

When a customer calls asking for a spare part or help with a repair in the field, Langen Packaging's customer support teams can access the relevant BOMs and documents in ENOVIA SmarTeam. With a few simple clicks they can launch the latest drawing in the viewer, allowing them to provide customer support on the machine as it has been maintained and updated over the years.



Tokarz believes ENOVIA SmarTeam gives Langen Packaging an advantage over its competitors. "Our customers know we understand them as a client and know what their business is all about, even down to details such as their requirements for a machine a year ago," he says. "ENOVIA SmarTeam gives us the ability to retain and track that kind of customer information and that gives us a competitive advantage."

ASCENDBRIDGE SUPPORT MAKES GOOD CHOICE BETTER

Tokarz's satisfaction with Langen's choice of ENOVIA SmarTeam has only been enhanced by the level of support Langen gets from its local DS value-added reseller AscendBridge.

"AscendBridge's proximity and responsiveness have proven to be a tremendous advantage," he says. "When we call on AscendBridge, we have someone brilliant sitting in our building, helping us out, within a few hours. That is very important because we have put ENOVIA SmarTeam totally in control of our business. It's a wonderful product, but it's important to know that we have the support we need because we are so dependent on it."

With ENOVIA SmarTeam and AscendBridge, Langen has freed up significant staff resources that once supported its legacy system. "Over the years, we had developed many different databases and maintaining them created unwanted overhead," Tokarz says. "Replacing them with a commercial product that can easily be supported by AscendBridge improves our flexibility and makes us less dependent on our internal expertise."

A BRIGHT FUTURE

Langen Packaging constantly identifies new ways to use ENOVIA SmarTeam. The company's future plans include expanding the use of ENOVIA SmarTeam to the Marketing department, which maintains a large library of videos, photographs, brochures and technical literature about Langen Packaging's products. Storing and managing all of those materials in ENOVIA SmarTeam will ensure easy access to the most relevant and up-to-date information throughout the company.

Tokarz says Langen Packaging is also assessing the ENOVIA SmarTeam Community Workspace module to provide its customers with Internet access to their own assemblies and BOMs. He envisions customers using the same solution for RFQs, and leveraging it to give vendors access to product drawings or to bid on requirements for manufacturing parts.

For more information:

Langen Packaging, www.langeninc.com

AscendBridge, www.ascendbridge.com

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Several years ago, Joe MacDonald, founder of Urban A&O architects in New York City, was awarded a grant by Harvard University Graduate School of Design to study architectural patterns based on a single cell repeated in a non-recursive manner, meaning that each repetition is different.

AscendBridge has been instrumental in advancing CATIA knowledge within our office.

Joe MacDonald. Founder of Urban A&O

> **URBAN A&O** ARCHITECTURE LANDSCAPE URBAN DESIGN

But non-recursivity is well beyond the capabilities of conventional architectural visualization tools, which lack mathematical definition. MacDonald found the answer he needed in CATIA, Dassault Systèmes' powerful 3D modeling solution that provides a unique combination of surface and solid modeling capabilities on a single platform.

CATIA has become Urban A&O's secret weapon, allowing it to design and build forms other architects can only dream of and winning the six-year-old firm high-profile projects such as the Water Planet exhibit at the new California Academy of Sciences in Golden Gate Park in San Francisco.

MOVING FROM VISUALIZATION

Conventional 3D visualization tools do not include the mathematical functions required to make the jump from design to construction. To transition to construction, architects are forced to first export their work into an engineering program, then later into a computer-aided design (CAD) program to generate project documents. Translating the data takes considerable time and makes it impossible to simultaneously

consider the effects of a change on both design and engineering.

In contrast, CATIA's powerful surface generation, template-based modeling and documentation tools make it possible to perform all of the functions needed to move from concept to construction in a single environment. This saves time and makes it possible to immediately evaluate the effect of changes upon form, function,





success story





By giving us the ability to do free-form design and parametric modeling and produce buildable plans in a single environment, CATIA gives us unique capabilities that other architectural firms cannot match.

Joe MacDonald, Founder of Urban A&O

constructability, cost, and more. The result is that architects can optimize the design to a much higher level than was possible in the past.

MacDonald took advantage of these capabilities in creating the Bone Wall, a screen at the Storefront for Art and Architecture in New York City. "The Bone Wall was an experiment that demonstrated how parametric modeling provides the best of two worlds design and function - that normally work at cross-purposes to each other."

DESIGNING THE WATER PLANET EXHIBIT

MacDonald applied CATIA to designing the walls and islands that define the Water Planet, the central environment of the Steinhart Aguarium, with contours that resemble flowing ocean currents. MacDonald

used CATIA to create the complex exterior surfaces of the walls and islands. He created splines to define complex surfaces and manipulated the control points to create captivating shapes. The software provided mathematical definition in the background. He then copied the shapes and manipulated their control points to create further variants.

One of the more interesting challenges was a housing for a nozzle that propels a jet of water two meters (six feet) into a fish tank. The nozzle needed to be precisely positioned so that the jet landed in the tank rather than dousing museum visitors. Frank Melendez, Design Director for Urban A&O, knew the speed of the jet as it left the nozzle and used hand-book formulas to calculate the angle at which it needed to be aimed to target the tank. Then he used CATIA to integrate the mechanical details used to position the nozzle into the design.

and sent them to a prototyping company. The CATIA geometry was used to mill positive patterns from high-density foam and lay up the fiberglass over the foam. The fiberglass wall panels were then attached to sheet rock walls cut with a water-iet from IGES files provided by Urban A&O.

The Water Planet exhibit, which opened in September 2008, is already contributing to the firm's buzz. Rather than resting on its laurels, MacDonald says Urban A&O will use CATIA to "continue to explore the everincreasing intricacy and precision with which we are able to both conceive and realize a project as a result of unprecedented design and fabrication technology. By giving us the ability to do free-form design and parametric modeling and produce buildable plans in a single environment, CATIA gives us unique capabilities that other architectural firms cannot match"

MAKING THE TRANSITION TO CONSTRUCTION

"We were thinking about what materials to use and how to make the walls and islands from the verv beginning of the project," MacDonald said. "We spoke with colleagues at automotive design studio who recommended using fiberglass." Urban A&O exported IGES files

FOCUS ON ASCENDBRIDGE

MacDonald credits AscendBridge Solutions Inc., Urban A&O's Dassault Systèmes valueadded reseller, with providing training that helped the firm optimize its use of knowledgebased modeling technology. "Parametric modeling is a larger shift than one might expect," MacDonald said. "AscendBridge has been instrumental in advancing CATIA knowledge within our office".

For more information: Urban A&O, www.urbanao.com

AscendBridge, www.ascendbridge.com

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TO MODELING



V6: More Value for More Users with Release 2009x

PLM 2.0 - PLM Online for All - offers industry what Web 2.0

offers the general public: a fully participatory web where user

language of 3D, PLM 2.0 expands PLM beyond engineering and

manufacturing to fully include both business users and consumers.

interactions generate knowledge. Leveraging the universal

EXPERIENCING V6

Numerous companies are already experiencing the potential of V6, including Skanska in the architecture industry, Procter & Gamble in consumer packaged goods, Nikon in high tech, Pacific Brands in apparel, Hoffman Enclosures and Schuler in industrial equipment, Johnson Controls and novero in automotive and Piaggio Aero Industries in aerospace.



Dassault Systemes continues to make PLM 2.0 a reality with the introduction of R2009x, the latest release of its V6 platform. Enhancements to the V6 portfolio span all DS brands, including CATIA, DELMIA, ENOVIA, SIMULIA and 3DVIA, and support the six

core values critical to enabling PLM 2.0:

GLOBAL COLLABORATIVE **INNOVATION**

V6 expands PLM to include business users and consumers in a product's lifecycle, using the universal language of 3D and the power of online communities to involve everyone with a stake in a product. For example, a maintenance technician and a design engineer in different countries, collaborating online in 3D and via webcam, can explore the product model to pinpoint a problem and plan necessary repairs.

Enhancements in V6R2009x allow an unlimited number of online users to interact in 3D,

leveraging the collective intelligence of geographically dispersed teams. Design changes can be captured and sent to offline collaborators, delivering on the V6 "design anywhere, anytime" philosophy.

LIFELIKE EXPERIENCE

With V6, the 3D product looks and behaves as it will in real life. For example, a marketing executive can show her company's newest product to a consumer focus group in an interactive 3D environment and demonstrate



For example, Purchasing, Engineering and Maintenance might

READY-TO-USE PLM

BUSINESS PROCESSES Industry-specific best practices

solution spotlight

Piaggio Aero Industries

V6R2009x offers new industry solutions, including environmental regulatory compliance, on the production-proven V6 collaborative platform.

that the virtual product will not break even when dropped on a virtual floor. Also, the intuitive V6 interface, which imitates real life, allows any user to easily search for information, communicate, collaborate, and experience products online in 3D.

V6R2009x enhances lifelike experience with real-time rendering capabilities with new materials, visual effects and paint shaders, delivering heightened realism to virtual products. V6R2009x also updates the V6 PLM navigation paradigm, offering instant 3D proximity searches and the ability to navigate among simulation intellectual property (IP) and requirement, functional, logical and physical product definitions.

V6 can now simulate a virtual numerical control machine as it would be experienced on the shop floor, allowing users to create, validate and optimize NC tool path programs.

SINGLE PLM PLATFORM FOR IP MANAGEMENT

The pervasive collaboration of PLM 2.0 requires a platform that can federate all product knowledge no matter where it resides - in the PLM system, another enterprise application, or an unstructured data source - for easy access from anywhere.

collaborate online in real time to select the part that provides the best balance among competing priorities of price, performance and durability.

V6R2009x adds a fully integrated automotive body-in-white solution that leverages a single data model and environment for IP management, to deliver weld point management from product design through manufacturing planning. V6R2009x also includes an engineering bill of material (BOM) configuration solution that manages configurations at the product unit level.

ONLINE CREATION AND COLLABORATION

In today's global economy, workers must be able to move projects forward from anywhere at any time. For example, a designer may log in remotely to edit in context a design that resides in the central office database. With V6. product authoring is enabled online for realtime, concurrent work across multiple remote locations. V6 also brings product requirements together with functional, logical, and physical (RFLP) definitions of the product.

V6R2009x applies those capabilities to new functionalities, including advanced systems simulation within the 3D digital mockup and the ability to specify component connection information once for reuse across a wide variety of disciplines. Also, new composite design approaches, "grid" and "solid," are

added for optimized design, and mating with non-composite structural

V6R2009x delivers compliance capabilities for regulated industries, from emerging

enable a rapid return on investment in PLM

2.0 implementations and unify engineering

and enterprise business processes.

regional environmental regulations for process (REACH) and high-tech industries (Korea RoHS), to FDA-compliant capabilities for auditing and reporting on product development in life sciences.

LOWER COST OF OWNERSHIP

V6 offers a single database for all applications and embraces SOA standards, reducing the cost of ownership and allowing easy enterprise integration. V6R2009x delivers improved file server scalability and enhanced data indexing, allowing better searching and optimized server capacity.

V6R2009x is designed to extend the value of customers' existing PLM assets. Easy transition scenarios are available for the varied user base, including those with mixed DS and non-DS applications. For example, support for collaborative V4/V5/V6 design scenarios enables gradual adoption of V6 by an OEM and its supply chain. In parallel, Dassault Systèmes continues to invest in V5 technology, including the recent release of V5R19, with functionality enhancements that are synchronized with and available in V6R2009x•

For more information:

For a complete list of functionality enhancements in V6R2009x, visit www.3ds.com/v6

Ford Global Powertrain Organization

Founded in 1902, Ford Motor Company has many historical achievements to its legendary name. From large-scale manufacturing of cars using moving assembly lines, to the invention of the pony car category with the still-popular Ford Mustang, Ford has consistently set standards for innovation and quality.

to Improve Design Efficiency

Standardizes on CATIA Globally

The tradition continues today. In 2007, for example, with five vehicles ranking at the top of their categories, Ford received more initial quality survey awards from J.D. Power and Associates than any other automobile manufacturer.

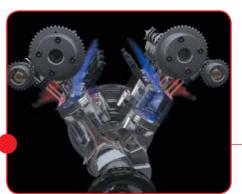
Still, increasing globalization of the world automobile market means that more companies are wing for consumers' business. To be successful, automakers must introduce increasing numbers of products that exceed consumers' expectations and grab their attention while continually reducing costs. Not surprisingly, one of the four priorities of Ford CEO Alan Mullaly's ONE Ford plan is to "accelerate development of new products our customers want and value."

One solution increasingly helpful to the industry's success is CATIA, a Product

Lifecycle Management (PLM) system that is a key enabler of product creation. Ford launched CATIA in 2003 for Body-in-White (BIW) development of the Ford Fusion, Mercury Milan and Lincoln MKZ vehicle programs, followed by adoption by Ford's interiors, chassis and electrical groups. Ford's Global Powertrain Organization (PTO), including the engine,



facilities in 14 countries.



Ford's new Ecoboost engine





2009 Ford F-150 being assembled at the Dearborn, Michigan Truck Plant

Best practices have been a big asset in helping us develop our template strategy and customize the training.

Jeff Bautz, PTO 6-Sigma Deployment Director/Design Manager, Large Gas & Diesel Engine Engineering

transmission and driveline development groups, is the latest major Ford organization to make the switch.

"Companies that adopt the latest technology to streamline decision-making and product delivery at best-in-class quality are the ones that will rise to the top in this extremely competitive environment," said Pete Lamoureux, Manager of C3P-NG Deployment, Delivery & Digital Build, Ford Global PD Digital Innovation.

EMPOWERING GLOBAL COMMUNICATION

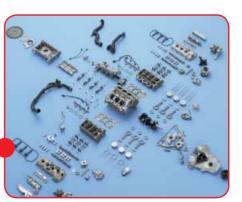
Ford Motor Company operates in 200 markets across six continents, so it is critical for powertrain engineers and designers to easily share design information, processes and tools on a global scale. The Powertrain organization alone works with 42 manufacturing plants, four design and engineering centers and six prototype

The organization's workload also is enormous, adding to the imperative of seamless communications. In the past year the Powertrain organization has launched 20 major programs; overall it supports more than 120 programs, including in-line, diesel and v-engines, and automatic and manual transmissions.

One of the latest Ford Powertrain innovations is EcoBoost, a new high-volume, affordable engine technology slated for a range of global vehicles, from small cars to large trucks. EcoBoost uses gasoline turbocharged direct-injection technology for up to 20% better fuel economy, and cuts CO2 emissions by as much as 15%. The new technology will be available in half a million Ford vehicles annually in North America during the next five years, beginning with the new Lincoln MKS and Ford Flex in 2009.

DRIVING EFFICIENCY IMPROVEMENTS WITH CATIA

To meet the challenge of migrating many of



Ford's existing global powertrain programs while designing new programs with a significantly streamlined team, major improvements in efficiency are paramount. Key capabilities for meeting this goal included the need to develop and adopt new best practices and methods, launch an integrated template strategy that contributes to more consistent designs of higher quality, and leverage improved design capabilities to prepare all engineering disciplines, including suppliers, for implementation.

Updating PTO's CAD tool to take advantage of new technology also presented opportunities, including the ability to leverage intelligent features through embedded knowledgeware, and accelerated development through a greater reliance on engineering analysis at the design stage to arrive at solutions faster.

The Powertrain organization therefore decided to leverage its new CATIA solution worldwide to support Ford's focus on improving time-to-market, further increasing product quality and reducing product development cost.

MOVING FAST AND INTELLIGENTLY

Dassault Systèmes (DS) consultants worked on site with Ford to get the adoption off to a running start, and remain on site to assist Ford in identifying new opportunities to maximize the return from its new capabilities.

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Ford's integrated

template strategy is a

top-down philosophy

standards, incorporate

design engineering rules

and increase reusability

to drive higher quality

to drive modeling

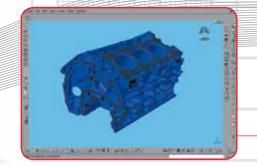
and reduce time.

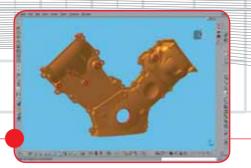
Lead, Ford Global PD Digital

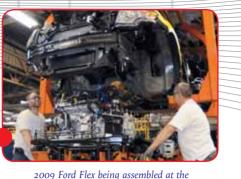
Innovation

Sassan Khoubuari. Powertrain

C3P-NG Methods and Deployment







success story

2009 Ford Flex

customized tools."

with Ford-specific content.

"Best practices have been a big asset in helping us develop our template strategy and customize the training," said Jeff Bautz, PTO 6-Sigma Deployment Director/Design Manager, Large Gas & Diesel Engine Engineering.

DS consultants also provided customized

training and assisted in the development of

methods and improved processes. Advanced Powertrain training was developed

based on proven best practices, coupled

Ford also recently selected DS to provide a global training program based on CATIA and Companion, the DS learning solution.

A BIG CHANGE WITH NO PRODUCTIVITY LOSS

Pilot projects were established, and the engine teams in both Europe and North America have completed initial engine designs. More than 95% of the pilot projects for transmission assembly have been modeled and released for production. In all, six programs in the Transmission and Driveline organization have migrated more than 80% of all activity to CATIA V5. Five programs in the Engine organization have migrated as much as 40% of their activity to CATIA V5. Ford also is taking advantage of its expanded capabilities to migrate away from expensiveto-maintain custom tools and methods it had developed over the years.

"Today, at the one-year point, productivity is already higher and we are positioned for further gains by taking advantage of advanced features," said Lisa Greene, Transmission and Driveline Engineering CAD/CAE Manager. "With such a major change we would have expected significant delays as our technical team overcame the

learning curve, but the initial project was completed in the same time that would have been required with our previous heavily

MASTER SKELETONS IMPROVE **DESIGN ROBUSTNESS AND** REUSABILITY

Based on the success of the initial pilot, the Powertrain organization has utilized advanced solution features to achieve additional improvements in its design and engineering methods. For example, to promote robustness and reusable products, Ford Powertrain staff defined master skeletons that allow many related parts to be updated with a single change entry. When the skeleton is updated, all of the designers working on components referenced to the skeleton automatically receive the update.

Within engines, for example, Ford can now iterate concepts for valvetrain designs significantly faster, reducing time and/or allowing more iterations to be completed.

"Templates have helped us reduce the design time for the cylinder head and valvetrain by up to 11 days for each iteration, and we often have 20 iterations." Bautz said. "This makes it possible to optimize the design to a higher quality level. Preliminary estimates are that we can cut three to four weeks off the time required to concept and design an engine."

Ford Powertrain engineers also have begun creating templates in CATIA to make the design of hard-to-model parts consistent, leading to higher-quality designs. For example, gears and splines for transmissions were previously modeled manually. This approach was time-consuming and prone to errors such as an incorrect profile angle.

If undetected, this could require correcting the dies at a substantial expense after tooling was complete.

"Ford's integrated template strategy is a top-down philosophy to drive modeling standards, incorporate design engineering rules and increase reusability to drive higher quality and reduce time," said Sassan Khoubyari, Powertrain C3P-NG Methods and Deployment Lead, Ford Global PD Digital Innovation.

Ford PTO designers can now enter intelligent

rules-based information that defines the gear

or spline, such as the pitch diameter and number of teeth. The template automatically generates the design, saving an average of two hours for each of the 18 gears in a typical transmission. Additional time is saved downstream, thanks to the ability to quickly make changes by modifying design parameters, and a substantial reduction in errors that would otherwise (111111111111 require costly downstream production tooling. changes.

>> Today, at the one-year point, productivity is already higher and we are positioned for further gains by taking advantage of advanced features.

Oakville, Ontario, Canada Assembly Plant

Lisa Greene. Transmission and Driveline Engineering CAD/CAE Manager

Setting the hard points and sizing for the cylinder head and valvetrain is another example of the value Ford has achieved. The valvetrain - the portion of an engine that includes the valves, lash adjusters and rocker arms - was not associative in the powertrain organization's previous CAD tool, so portions of the design had to be rebuilt from scratch with each design iteration.

Leveraging associative capabilities in CATIA, Ford engineers developed a head and valvetrain skeleton model that references the required components and their relationships and then automatically updates the design with each new iteration. The valvetrain template will eventually work in concert with other design templates, along with additional templates used for engineering analysis and

"The time we save on each design iteration gives us the ability to run substantially more design iterations than was possible in the past," Bautz said. "This means we have more time to produce a more robust design and provide better performance and reliability to our Ford customers."

The Powertrain technical staff is now developing templates and deploying advanced modeling practices for all future powertrain programs.

FAST START IS JUST THE BEGINNING

Ford has gotten off to a fast start with strong results, but the Powertrain teams see numerous opportunities to build upon the benefits already achieved and extend them to new areas.

"We are continuing to explore opportunities to increase the integration between CAD, CAE, and engineering disciplines to improve concurrent engineering," Khoubyari said. "We are looking to take days and months from our development process by exploiting this advanced technology."

For example, Ford is starting to integrate design rules into CATIA. One application of this capability is to establish protection zones that can be used to provide clearance for inserting the engine and transmission into the vehicle during the assembly process. Intelligence is provided so that the zone cannot be violated by parts installed before the engine and transmission, but can be violated by parts installed after that point.



Interactive Taurus cut-away exhibit at the 2009 North American International Auto Show

Protection zones are also defined by sweeping the engine and transmission around an axis to identify areas subject to roll during acceleration and deceleration, so these zones can be kept free of parts.

"It's the technology solution plus the employee knowledge and can-do attitude that brings results," Bautz concludes. "When you give the right tools to a strong team such as ours, there's no limit to what they can accomplish".

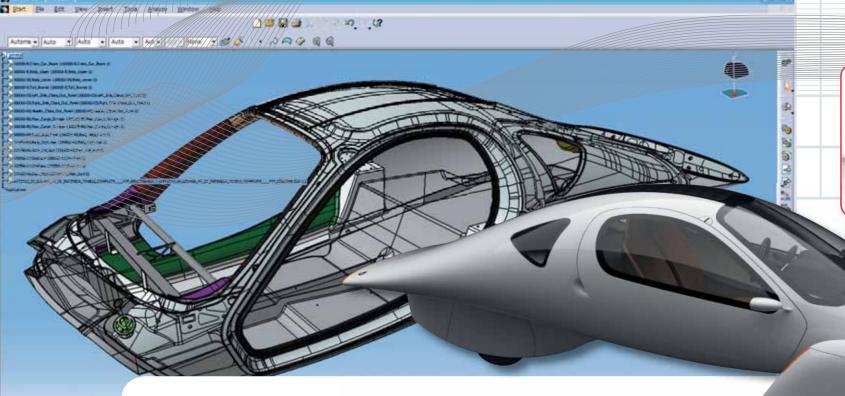
For more information:

www.ford.com

www.3ds.com/solutions/automotive/ overview

www.3ds.com/education/workplacelearning-solutions/companion-solutions

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Motive Industries Designs Futuristic Cars 50% Faster with CATIA

CATIA is revolutionizing the automobile industru bu making it possible for a small team to design and engineer a leadingedge vehicle from scratch in a matter of a few months.

Nathan Armstrong, President, Motive Industries



Motive Industries is a Canadian specialty design and engineering company that helps leading-edge vehicle makers translate great design ideas into manufacturable automobiles. A current highprofile project is the Motive Switch, a sporty two-door, two-wheeldrive, battery-exchange hybrid electric vehicle that is Motive's entry in the 2009 Automotive X Prize competition.

The \$5 million X Prize will go to the builder of the best vehicle that can achieve 43 kilometers per liter (100 miles per gallon), comply with current safety standards, create a viable manufacturing plan, and prove its performance in a series of races. Motive's entry will be one of the first all-composite vehicles ever designed, with a body made by resin-infusion molding and a composite chassis made with a thermoformed vacuum-molding process.

The traditional approach to designing a vehicle such as the Switch begins when a designer uses freeform surface modeling

tools to define the visible interior and exterior surface contours. These surfaces are then exported to a parametric solid

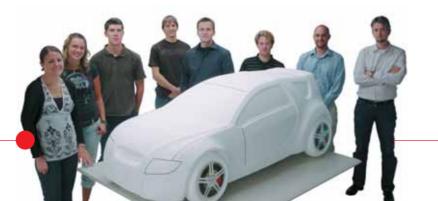
modeling environment, where the hidden, interior surfaces are designed to accommodate fasteners and the contours of interior components, along with the chassis, suspension and other vehicle systems. The drawback to the traditional approach is that every time the body design changes, the industrial designers must export a new surface model and reconstruct the solid model, a cumbersome and time-consuming process.

A NEW APPROACH TO **VEHICLE DESIGN**

"Thanks to our decision to use CATIA for









success story





Thanks to our decision to use CATIA for 3D virtual modeling, it is possible for just a few people to do what would take an automotive OEM hundreds of people to do using traditional methods.

Nathan Armstrong, President, Motive Industries

what would take an automotive OEM hundreds of people to do using traditional methods," says Nathan Armstrong, Motive Industries President. "CATIA dramatically improves the automotive design and engineering process because it combines powerful generative shape design tools along with very capable knowledgebased solid modeling capabilities."

modeling, it

is possible for just

a few people to do

Motive receives the surface data from its customers or creates it from scratch. "If the interior or exterior surfaces change, we make the change within the CATIA environment rather than having to import new surfaces and rebuild our solid model," Armstrong says. "We can easily move back and forth to conduct 'what if?' comparisons. This saves us 25% to 35% of the time involved in the vehicle design and engineering process."

KNOWLEDGE-BASED DESIGN **SAVES TIME**

Additional time savings derive from the

knowledge-based design capabilities of CATIA, which make it possible to intelligently link design parameters in templates so that a change made to a dimension automatically updates other related dimensions, including vehicle surfaces. "CATIA's knowledgebased design capabilities enable us to relocate a feature such as a ridge or flange with a few clicks of the mouse," Armstrong says. "The rest of the design adjusts itself automatically to accommodate the

"Knowledge-based design saves another 10% to 15% of the overall design and engineering time by simplifying the many changes that are required to integrate the various vehicle systems," Armstrong says. "That brings the total savings from using CATIA over separate surface and solid modeling solutions to as much as 50%."

FOCUS ON AVENTEC

As Motive grows its CATIA capabilities, it counts on Aventec, its Dassault Systèmes value-added reseller, for guidance and support. Aventec is in Markham. Ontario. outside Toronto, while Motive is in Calgary, Alberta. "Aventec has provided us with

excellent support even though they are located at a considerable distance." Armstrong says. "Aventec helped us to define exactly which modules we need and gave us substantial assistance in setting up the software. Most important, they have provided very timely and knowledgeable technical support services that helped us quickly achieve very high levels of productivity with CATIA."

Armstrong says Motive is now using these methods to complete the design and engineering work on the Motive Switch and then will begin building two vehicles for the competition. The company will also use CATIA Composites Design to generate ply patterns, simulate lay up, evaluate producibility and optimize design and material usage of body and chassis panels. With this approach, he expects to save 80% of the time previously required to design structural composite parts.

"CATIA is revolutionizing the automobile industry by making it possible for a small team to design and engineer a leading-edge vehicle from scratch in a matter of a few months," Armstrong concluded. "It's the future of the automotive industry".

For more information: Automotive X Prize, www.xprize.org

Motive Industries, www.motiveind.com

Aventec, www.aventec.com



Think Big with DS PLM

Founded in 1998 as a small design boutique for inventors, GID Development Corporation has evolved into a true one-stop source for product development and

production. To improve competitiveness, GID has embraced technology, implementing CATIA to empower its designs, ENOVIA SmarTeam to manage data complexity, and 3DVIA Composer to collaborate with its manufacturing partners in China.

Using CATIA. we've achieved time savings of 30% in the completion of a project's first phase.

Jim Grimes. GID Founder and Lead Designer



GID Founder and Lead Designer Jim Grimes believes blazing a path with new technology has been pivotal to the six-employee company's success. "These solutions pay for themselves on the first one or two projects, because without them you couldn't even do the projects," he says.

Adds Pat McCarville, GID President: "The engineering and design disciplines we've been able to master utilizing our Dassault Systèmes solutions rival anything that any team of engineers at any enterprise level can do."

GID's pioneering spirit is paying dividends in the current tough economy, allowing it to take business its competitors cannot and delivering a start-to-finish capability offered by few in its market niche. "Prior to our effective implementation of DS PLM, our margin per project was 9% to 12%, McCarville says. "Today, GID achieves margin per project of 20 to 25% when the projects are in full production."

CATIA DESIGN STUDIO: **BOOSTING INNOVATION FOR DESIGN EXCELLENCE**

GID has combined the capabilities of CATIA Imagine & Shape and CATIA Functional Molded Product to offer design capabilities its competitors simply cannot match using other design tools - a powerful edge in competing for available business. Both modules are part of the CATIA Design Studio solution portfolio.

Imagine & Shape enables free-form design studies without the need for physical mock-ups. GID's designers can quickly arrive at the optimal balance between pleasing form and practical functionality while maximizing the emotional content that makes consumers consistently choose one product over another.

This technology - unique to CATIA - allows designers to play and experiment with a design challenge. Projects that would require hundreds of features and complex structure





success story



The engineering and design disciplines we've been able to master utilizing our Dassault Systèmes solutions rival anything that any team of engineers at any enterprise level can do.

Pat McCarville. GID President

trees in a parametric-based tool can be achieved with a few dozen features in CATIA Imagine & Shape.

"With Imagine & Shape I can quickly develop several concepts, then easily modify them with the client to achieve a single design," Grimes says. "Using CATIA, we've achieved time savings of 30% in the completion of a project's first phase."

Functional Molded Product, meanwhile. accurately turns the design into a manufacturable product, from splitting the core of a mold and defining cavity geometry to addressing considerations like drafts and parting lines. Functional Molded Product, Grimes says, gives GID the confidence that the designs it sends to its manufacturing partners will result in a perfect prototype on the first try, every time.

Functional Molded Product also contributes to reducing design cycles and managing complexity. "It's a real key to my ability to keep up with the demand and quality our clients expect," Grimes says. "It lets me do things I couldn't dream of doing any other way. If you really get into the finer features of CATIA, you can become a powerhouse as a small business."

STRATEGIC MOVES

As the company moves forward strategically for the future, GID also has implemented ENOVIA SmarTeam to streamline its management of 3D design data, as well as its development and outsourcing processes for manufacturing, ENOVIA SmarTeam has allowed GID to improve its processes, from 3D design to communication with suppliers, by helping manage data to create accurate

BOMs for manufacturing, track parts and costs, and guickly locate data for reuse in new projects.

GID also is employing 3DVIA Composer, which reuses existing product design and manufacturing data to cut the time and cost of producing documentation. Simplifying the technical draft and illustration process with 3DVIA Composer makes collaboration easier, less time consuming and less expensive for GID. Each time a design change occurs, documentation created with 3DVIA Composer updates as well.

3DVIA Composer also simplifies the process of working with GID's Chinese manufacturing partners. Using 3D design data from CATIA, Composer automatically explodes design drawings for easy demonstrations of the assembly process while checking for clashes and other common errors. By communicating visually rather than with text, GID eliminates language barriers and expensive translations.

FOCUS ON RAND-NORTH AMERICA

Grimes believes GID's use of CATIA, ENOVIA SmarTeam and 3DVIA Composer gives his small company a big competitive advantage. But he also gives significant credit for GID's success in using the solutions to Dassault Systèmes business partner RAND North America.

McCarville says the ongoing support RAND provides is critical as GID continues to grow. "RAND understands small businesses - our needs, how we operate and how best to support us," he says. "We've needed their support to get where we are today, and we'll need it to go where we are going tomorrow."

McCarville and Grimes believe DS PLM solutions are critical to "threading" GID's small business into the "disengaged" global enterprise of the future. "Our idea is to invest in it, learn it, and roll with the changing landscape," Grimes says.

For more information: www.gidcompany.com

www.rand-na.com

CATIA FOR MOLD & DIE: MOLDED TO YOUR NEEDS

CATIA for Mold & Die is an integrated, end-to-end solution that combines technologies, methodologies, and best practices to help tooling companies improve their ability to focus on product and process innovation and compete more effectively in the global marketplace.

Based on a generative approach that leverages knowledge and multi-discipline collaboration, CATIA for Mold & Die addresses all disciplines in the tooling industry and provides the capabilities required to optimize the complete process from design and engineering to simulation and manufacturing, reducing design, manufacturing, storage and maintenance costs while simplifying change management.

To read the full article:

www.3ds.com/contactmag-extra

For more information:

www.3ds.com/catiaformoldanddie



Miller Formless Makes Short Work of Service Manuals with 3DVIA Composer

With nearly four decades of experience, Miller Formless knows that when it comes to working with concrete, saving time is extremely important. The company, based in McHenry, Illinois, has been manufacturing concrete slip-form paving equipment for road, curb, barrier, and sidewalk construction since 1970. That's why the company recently purchased 3DVIA Composer to create content for its parts and service manuals and develop 3D interactive assembly instructions more efficiently and cost-effectively.

Prior to 3DVIA Composer, technical

illustrators at Miller Formless Company relied

on a competitive solution that was difficult

"The interface between that tool and our CAD

system was very cumbersome," says Jim

Szamlewski, Vice President of Manufacturing

and Engineering. "We purchased 3DVIA

Composer because of the interface with

SolidWorks, which is so smooth and

seamless; it works extremely well."

to use and time consuming.

We purchased **3DVIA Composer** because of the interface with SolidWorks, which is so smooth and seamless: it works extremely well.

Jim Szamlewski, Vice President of Manufacturing and Engineering, Miller Formless Company



Before adopting 3DVIA Composer, technical illustrators at Miller Formless had to wait for engineers to convert their design data into STEP format before they could begin working with it in their former technical illustration tool. Now, with 3DVIA Composer, technical illustrators can easily pull their SolidWorks CAD data directly into 3DVIA Composer in a single step. This saves time for both the technical illustrators and the engineers, who

can now focus on design rather than on

providing data for documentation.

"With 3DVIA Composer, the 3D data is easily accessible to the technical illustrator, and so is the bill of material information." Szamlewski said. "With 3DVIA Composer, the bill of material information is available automatically."

But speed and efficiency aren't the only benefits Miller Formless realized when it moved to 3DVIA Composer. The solution is also fast and easy to learn and fun to use. Just two weeks after installing the software, technical illustrators at Miller Formless were generating content using 3DVIA Composer and enjoying improved productivity. "Our technical illustrators are actually excited about having this product to do their job," Szamlewski said. "This has translated into even more productivity for the company".

For more information:

www.millerformless.com

www.3dmojo.com

www.3dviacomposer.com





in practice

Relational Design at Age 14: Georgia Tech Program Trains Tomorrow's Engineers Today

The equation is simple: Education systems globally produce an estimated 1 million new engineers each year, but the American Society for Engineering Education estimates the world needs 2 million. This shortage is most critical in advanced economies and especially acute in the United States, where graduating engineers who are not US citizens cannot be employed in a number of expanding industry sectors, including aerospace.

The School of Aerospace Engineering at the Georgia Institute of Technology (GIT),

popularly known as Georgia Tech, recognized the issue several years ago and developed a summer enrichment program to generate more engineers by creating enthusiasm among students for careers in science, technology, engineering and mathematics (STEM). Beginning with elementary-age students, the GIT program leverages a wide variety of Dassault Systèmes brand solutions, including SolidWorks, CATIA, 3DVIA and DELMIA, and reflects the fundamental principles underlying the DS academic framework program "Kindergarten to

Employment," or K2E.

Partially sponsored by Agusta Westland and called "Engineering for the 21st Century," the GIT program provides students with the most advanced engineering tools and a unique challenge: to create digital designs of unique, one-of-a-kind objects.

Want to learn more?

To read the full article, please visit www.3ds.com/contactmag-extra



Looking for a Partner Solution? Find it at DS PLM **MarketPlace**

Dassault Systèmes' partners have developed

more than a hundred specialized, industryspecific solutions built directly on top of the Dassault Systèmes PLM platform so that they work seamlessly with CATIA, DELMIA, ENOVIA and SIMULIA. Dassault Systèmes' PLM Marketplace, an online community, makes finding these solutions easy by connecting referenced partners (software, solutions, and technology providers) with customers and Dassault Systèmes Value Added Resellers (VARs).

In just a few clicks, customers can identify the complementary solutions in the PLM MarketPlace portfolio that best meet their needs from among the 130 currently referenced, customized solutions provided by 25 referenced partners. Customers have access to detailed information about referenced partners and their approved solutions by way of online brochures, videos, and lists of prerequisites and benefits. They can add the product of their choice to their shopping cart and submit an online request for a quotation to their preferred Dassault Systèmes VARs.

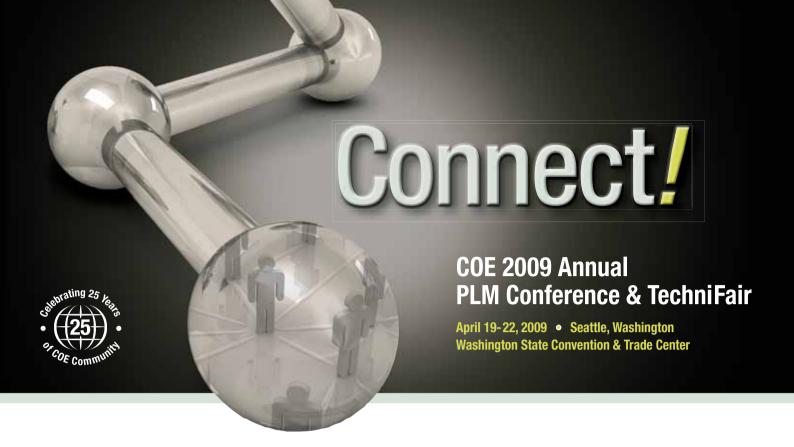
Customers who already have a strong business relationship with VARs that are not yet part of the PLM MarketPlace are urged to encourage their VARs to apply for free access. New customers without established VAR relationships will be assigned to a Dassault Systèmes reseller

Want to learn more?

To read the full article, please visit www.3ds.com/contactmag-extra

To access the PLM MarketPlace, please visit www.plmmarketplace.com

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Hear from Top PLM Experts Around the World

Don't miss Kevin Fowler's keynote presentation, *Ten Years After at Boeing Commercial Airplanes*, along with top PLM executives, including Al Bunshaft, IBM PLM, Jacques Leveillé Nizerolle, Dassault Systèmes and more.

Major themes addressed at the annual must-attend event teach you:

- What you need to know about V6
- · How to successfully work in a heterogeneous environment
- How to navigate issues of accessibility, data migration and usability as PLM technologies change
- How you can implement PLM and what you can learn from other implementations
- What are the challenges of collaboration in a PLM environment including product development, production within the supply chain and post-delivery issues

Celebrate COE's 25th Anniversary!

Join more than 1,000 COE members and Dassault Systemes PLM solutions users at the nation's premier user-driven PLM event for three days of education, training and networking at the COE 2009 Annual PLM Conference & TechniFair.

Register today and help celebrate 25 years of COE Community.





Founding Partner



Bringing together the users of Dassault Systèmes PLM solutions

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