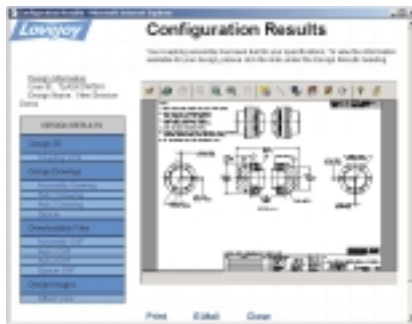


Computer design

Coupling configurator

The Configurator online tool from **Lovejoy, Inc.** translates raw data into usable CAD drawings and dimensional data for various styles of flexible couplings used in multiple power transmission applications including pumps, compressors, and gearboxes. Viewers can download or e-mail their

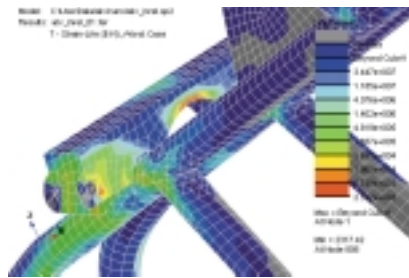


selection to a colleague. The website includes more than 20,000 couplings with selections suitable for either inch or DIN metric specifications. Currently the curved Jaw, torsional LM, and disc couplings are configurable and available in engineering CAD drawings. The configurator can automatically compute certain parameters, such as torque, when the user enters power and rpm data. Features include definitions of coupling styles and terminology; side-by-side comparisons of different coupling styles; photos, specifications, and performance data; and custom configuration of selected coupling types.

For more information, circle 155

Durability analysis

A line of nSoft software from **nCode** transforms measured or predicted time series data into engineering information so customers can easily set loading targets. **Deere & Co.** is currently using nSoft and FE-Fatigue as a durability analysis standard for its global operations. FE-Fatigue enables engineers to evaluate the fatigue performance of designs early in the development cycle and to introduce



new products more quickly while maintaining safety and reliability standards. Engineers using the software can design products that are able to withstand rigorous operation, according to the company, and nCode software can be customized for specific applications.

For more information, circle 156

Design visualization

Actify's SpinFire 5.0 is a scalable solution that allows companies to host and share critical product design information securely, regardless of the CAD file type, across an entire enterprise via the corporate network and Internet. Organizations can

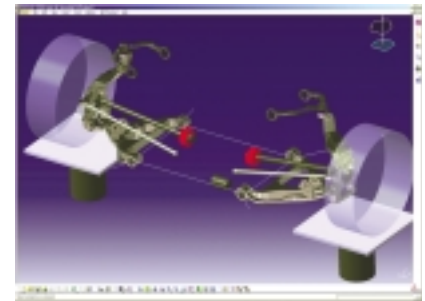


manage the distribution of design information simply and effectively, while controlling access to designs by different users, departments, suppliers, and customers. The system can be deployed as a stand-alone server-based solution or it can be integrated, via the software's open architecture, with a company's existing PLM, PDM, ERP, or EDM environment.

For more information, circle 157

CAD-embedded simulation

MSC.Software Corp.'s MSC.Dynamic Designer for **Autodesk Inventor** and **EDS' Solid Edge** enables engineers to create motion models from CAD assemblies, simulate the dynamic

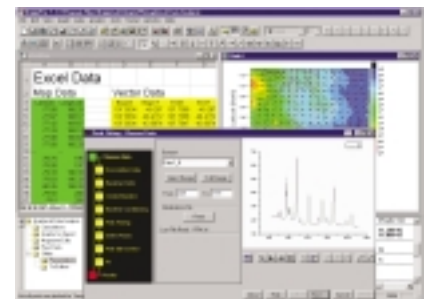


motion of the assemblies, and view animations and x-y plots of resulting motion without leaving the CAD environment. Enhancements included in the newest version of the product include animated result graphics, realistic animated springs, contact containers, isotropic bushings, and the MSC.ADAMS Solver.

For more information, circle 158

Graphing and analysis

OriginPro 7 from **OriginLab** offers the presentation-quality graphics, C language, and elements of the Numerical Algorithms Group function library of Origin 7, plus a suite of data-analysis and custom utility development tools. The peak fitting module provides peak analysis capability. To offer communication with other software applications and with hardware, the implementation of Origin C supports **Microsoft's** component object model



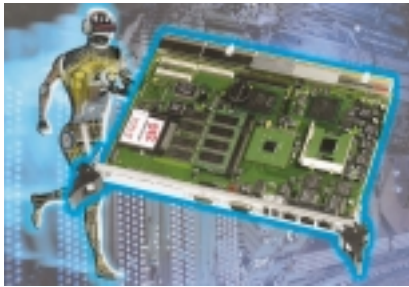
Computer design

programming. The dialog builder allows users to create their own graphical user interfaces.

For more information, circle 159

Single-board computer

Kontron's CP605 is a 6U CompactPCI single-board computer. The unit provides multiple configuration options, aiding use in high-end, harsh-environment, and/or cost-sensitive applications. Its 4HP design makes it suitable for use in



small spaces. The device features the **Intel Pentium 4** processor in a 478-pin package FC-PGA, and is available in either a high-performance version, operating at 2 to 3 GHz, or a low-power dissipation version using the **Mobile Pentium 4-M** processor operating at 1.2 to 2 GHz.

For more information, circle 160

Out-of-position testing

MSC.Dytran 2002 r2 from **MSC.Software Corp.** features tools for occupant-out-of-position testing to help automotive and aerospace manufacturers meet federal regulations and design safer products

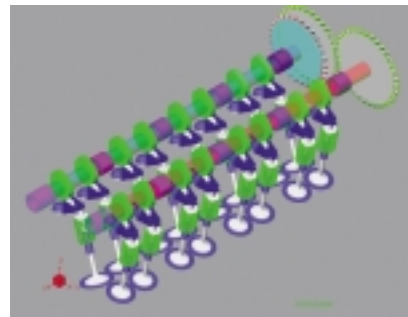


in less time and for less cost. Applications include airbag deployment and occupant interaction in vehicle crashes, sheet-metal forming, bird strikes on aircraft, explosive containment within aircraft structures, ship collision and grounding, projectile impact and penetration, drop tests, and fluid-sloshing effects on structures.

For more information, circle 161

Engine simulation

Optimum Power Technology has developed a link between Virtual Engines and LMS/DADS. A Virtual Engines 1-D gas dynamic model can be linked to a mechanically dynamic DADS valvetrain

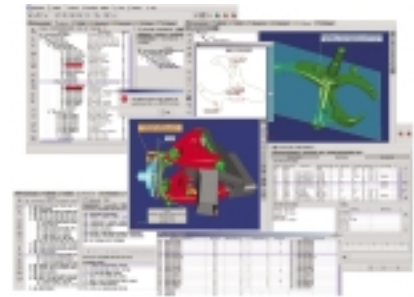


model. Boundary conditions for each simulation can be exchanged. DADS can use the pressure/time history from the engine simulation and Virtual Engines can use the predicted valve and piston motion from DADS. Running simultaneously, exchanging data, the overall results can be more accurate. Valve bounce or liftoff can be calculated more accurately and the impact on engine performance assessed.

For more information, circle 162

Manufacturing process management

Polyplan Technologies Inc. has signed a key agreement that allows it to embed, license, and distribute **EDS's PLM Vis** toolkit within its current **PolyCAPP** manufacturing process management software package. **PolyCAPP V2.8**

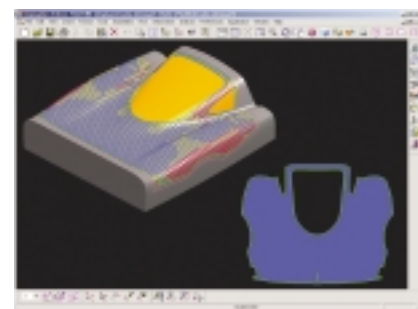


facilitates complex data communication across an entire enterprise and its supply chain by using 3-/2-D information from the CAD/PDM environment to enable secured collaboration for the creation and sharing of geometry, specifications, manufacturing processes, and documentation. It can also integrate with any ERP/MES system to ensure that the information created at the beginning of the design cycle flows through all processes down to shop-floor execution, with no re-entry of data. The net result is a decrease in cost and time to market, improved product quality, and an increase in engineering creativity.

For more information, circle 163

CAD for composites

Vistagy's FiberSIM 4.0 software, which creates a specialized CAD-integrated environment for designing and manufacturing composite parts, will be fully functional within **CATIA V5**. **FiberSIM** tools automate the design process, assess the producibility of a composite part, and generate manufacturing information including documentation, flat patterns, and data to interface with laser projectors, automated



Computer design

cutters, and fiber placement machines. It enables users to drive all aspects of preliminary design, analysis, detailed design, and manufacturing from within a single CAD master model, providing a complete digital product definition of a composite part.

For more information, circle 164

Product data management

SolidWorks Corp.'s PDMWorks and Smarteam provide benefits that will help manufacturing organizations ensure design accuracy, reduce design time, and bring products to market quickly. The products are integrated

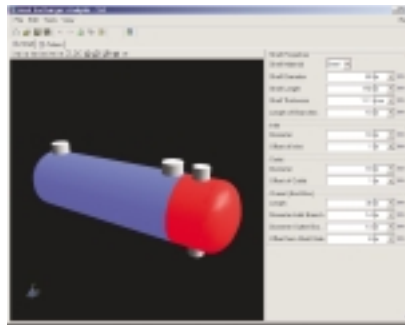


with SolidWorks 2003, the company's 3-D CAD software. PDMWorks provides automated revision control and captures a history of design activities, allowing people to work better as a team in a secure environment. Smarteam integrates with all the widely used CAD environments. It provides the tools designers need to manage, exchange, and collaborate on product information in a secure environment throughout the enterprise and across the supply chain.

For more information, circle 165

Knowledge management for software

AEA Technology has released version 2.0 of Enterprise Accessible Software Applications (EASA), which includes a new optimization module that automatically searches a defined parameter space for the optimal solution as defined by the user. EASA is a new type of knowledge-management



tool that allows companies to leverage their software expertise. Point-and-click tools are used to rapidly author simple Web-based applications and wrap them around any software running on any computer on the corporate network. EASA has proved particularly valuable for companies wishing to modernize and improve the accessibility of legacy software.

For more information, circle 166

Collaborative management

ITI ProjectView version 3.0 from ITI is an environment for collaborative project management through a Web portal providing secure yet seamless access to all types of business, manufacturing, engineering, and project data. It allows organizations to integrate and share data files, project plans, schedules, and other



forms of business, product, and process information in a controlled, secure, yet effective environment. Users can also schedule events or facilitate discussion forums through the site. The software is currently available in English, German, and Japanese.

For more information, circle 167

Estimating technology

AFR Estimating technology, based upon automatic feature recognition, is featured in Machine Shop Estimating (MSE) from **Micro Estimating Systems**. The technology can analyze parts to be cut by

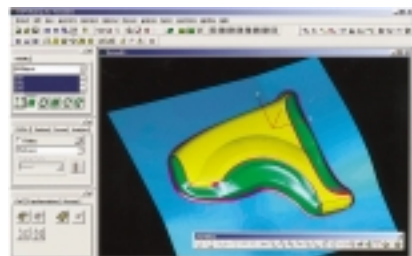


mills and lathes, and automatically generates a machine layout and cycle-time calculation. Other MSE 10.0 features include an optional AutoView viewer with expanded file formats, tighter integration with shop management systems, and a redesigned Direct Buy Library.

For more information, circle 168

Sheet-metal stamping

ESI Group's PAM-STAMP 2G is an integrated sheet-metal-stamping simulation solution, from die design feasibility to process validation and optimization. The software includes



PAM-DIEMAKER for fast design and optimization of binder surface and die-addendum, PAM-QUIKSTAMP for rapid stamping evaluation, and PAM-Autostamp for forming process validation and quality control. A robust interoperable architecture allows seamless CAD data information sharing without modeling discontinuity.

For more information, circle 169

Computer design

Simulation interface toolkit

National Instruments' Simulation Interface Toolkit allows design engineers to link LabVIEW graphical development software with **The MathWorks'** Simulink modeling and simulation environment to control and view Simulink model data and run models in LabVIEW. The toolkit is said



to reduce product development time by allowing engineers to move quickly from simulations and models to validating and testing real-world prototypes. Engineers can also use LabVIEW Real-Time and either PXI-based controllers or NI FieldPoint distributed I/O controllers to address high-end applications such as rapid control prototyping and hardware-in-the-loop testing.

For more information, circle 170

Software testing

Telelogic's Tau/Tester 2.0, the second release of its solution for advanced systems and integration testing, is based on the standardized test language TTCN-3 (Test and Testing Control Notation) and provides a migration path to TTCN-3 for users of Tau TTCN Suite and other tools that support the TTCN-2 conformance

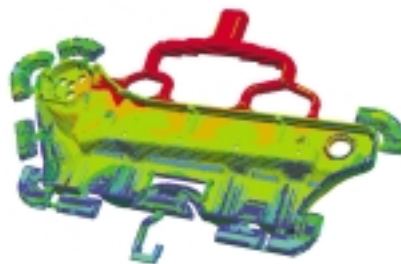


testing language. According to Telelogic, **Combitech Systems** is basing the development of its StarTest tool on Tau/Tester, enabling function and regression testing of complex automotive systems including MOST and CAN bus testing. Tau/Tester 2.0 also supports the creation of generic test suites that can be tailored at execution time for a specific situation, supports several languages such as Japanese, and generates test documentation in XML format.

For more information, circle 171

Casting simulation

PAM-CAST 2002 from **ESI Group** simulates a wide range of processes, including gravity and low-pressure die-casting, semi-solid, and lost-foam processes. The definition of the mold-cycling sequence, as well as cooling and heating devices, is now

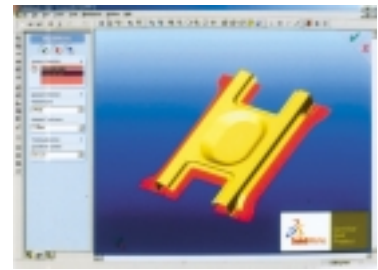


automatically generated by the user interface. The new graphical tool for CAD interfacing allows import of geometry files—including native formats like CATIA and UGS—and automatic topology control with fast surface meshing. The PAM-CAST user interface also provides volume meshing, a material database, process definition, and post-processing.

For more information, circle 172

Blank development

BlankWorks V2.1 from **Forming Technologies Inc.** provides **SolidWorks** software users with a fully integrated tool for developing optimal blank shapes for complex sheet-metal designs. The software improves formability and



product quality, and consistently reduces material costs and the number of trials in the prove-out stage. In addition to blank development, it provides a contour plot indicating the thickening and thinning that results from the forming process. It accounts for material stretch and deformation as well as bending, and can flatten any SolidWorks geometry. BlankWorks can be used to assess the feasibility of a part for manufacturing.

For more information, circle 173

Solutions service

A new service from **Enductive Solutions** drastically reduces the time, investment, and fixed costs required for companies to take advantage of the latest multidisciplinary computer-aided engineering (CAE) technology. The



firm's engineers work closely with a customer to understand a particular design engineering process, then recommend appropriate CAE tools that make it possible to improve product performance and reduce engineering costs by rapidly evaluating software prototypes of their products. Enductive then develops an interface that is tailored to the specific requirements, accesses only the required software functionality, and creates a simple user interface.

For more information, circle 174

Computer design

Shading capability

SGI and Dassault Systemes have collaborated to provide users of CATIA, ENOVIA, and DELMIA with a tool to provide increased realism of digital mock-ups with no additional hardware costs. OpenGL Shader functionality is now directly accessible to Version 5 users through real-time rendering menus. The shading uses the hardware acceleration on standard OpenGL graphics cards to support all the previous visual effects such as ClearCoat, bump mapping, and multiple textures, as well as other new effects.

For more information, circle 175



Bright monitor screen

CyberResearch's 23-in GDO 23 monitor has a high-bright 250-nit screen and UXGA resolution of 1600 x 1200 pixels so viewers can spot tiny



changes instantly. It displays 16.7 million colors, with typical contrast ratios of 500:1. Viewing angles are 170° horizontally and 170° vertically. It is available with an analog resistive touchscreen for applications in which pointing is more efficient than traditional typing.

For more information, circle 176

Durability analysis

Safe Technology Ltd.'s fe-safe v5 fatigue code for FE models produces a 15-fold reduction in analysis time, extends existing capabilities, and includes advanced features particularly relevant

to transportation engineers. High-temperature, time-dependent fatigue phenomena can be modeled using the creep fatigue module, fe-safe/TMF, which incorporates effects including stress relaxation, strain aging, cycle strain rate, and variation in damage due to out-of-phase stress and temperature cycles. fe-safe/rotate enables fatigue analysis of cyclically symmetrical parts from a single FEA result. The fe-safe Wizard is an alternative user interface that may be selected to provide a step-by-step guide through the software.

For more information, circle 177

Interface software

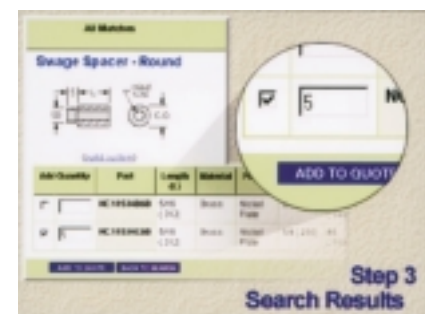
Delta Tau Data Systems' PMAC human/machine interface (HMI) software is a flexible and robust operator interface design tool for the PMAC motion controller. The HMI software is said to reduce the time and training required for an engineer to design custom operator interfaces, allowing an interface display to be created using a comprehensive suite of ActiveX graphical control objects such as buttons, indicators, strip charts, bar graphs, gauges, and sliders. Communication with the PMAC motion controller is based on PCOMM32, enabling a reliable

interface with single or multiple controllers through any available communication port.

For more information, circle 178

Online part selection

An interactive, no-download "part builder" product selection system, featured on Keystone Electronics' website (www.keyelco.com), permits quick and easy identification of more than 12,000



standoff, spacer, and handle part numbers used in automotive/aerospace/off-highway applications. This capability enables the user to review and select from a variety of critical product features—e.g., length, thread size, material, and finish—as well as locate the specific part number and accompanying specifications to meet individual requirements, and then promptly submit selections for sampling or quotation.

For more information, circle 179