Applications

Mechanical CAD/
Mechanical CAM

3DRAW® 3D DIGITIZER TABLET

E.W. Costello
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Polhemus, Inc.
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802-655-3159
802-655-1439 (fax)
800-357-4777 (tollfree)
e_costello@polhemus.com
**http://www.polhemus.com/
trackers/**

The Academy Award® winning 3DRAW® digitizer from Polhemus represents a whole new generation of devices for accurately measuring objects in both 2-D and 3-D space. Only 3DRAW uses a patented electromagnetic technology to precisely measure the position and orientation of the stylus tip in 3-D space. This allows you to record not only the X,Y, and Z coordinates but also azimuth, elevation and roll in places that would normally be hidden from a laser's line-of-sight.

3DRAW can output data directly into many of the popular CAD, graphics, animation, simulation and virtual reality environments. Measure anatomical, simulation and virtual reality environments. Measure anatomical features for medical and anthropological applications. Analyze and improve existing product designs. And much, much more. All for much less than more restrictive alternative technologies.

IRIX version compatibility:

ADINA®

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The ADINA® System is a state-of-the-art computer program that emphasizes reliable and efficient finite element techniques and user conveniences for pre- and post-processing. The ADINA System consists of the following programs:

- ADINA: displacement and stress analysis of solids and structures
- ADINA-T: for analysis of heat transfer and field problems
- ADINA-F: for fluid flow with heat transfer problems
- ADINA-IN: a pre-processor of the ADINA System
- ADINA-PLOT: a post-processor of the ADINA System

The ADINA System is used worldwide in engineering analysis and design for its specific strengths in many areas: modeling of general shell structures, static and dynamic contact conditions, and CFD.

IRIX version compatibility:

ANTARES™

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UES, Inc.
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ANTARES™ is a finite element-based 2D and 3D professional industrial material forming simulation system for all material flow processes governed by plastic flow, heat flow and phase transformations. it is a complete engineering analysis system for unit-forming processes that provides powerful capabilities for linear and highly non-linear stress analysis, compressible and incompressible material flow, including coupled heat flow, plastic, workpiece-tooling interactions and microstructure development. Important features include:

* Automatic evolution of complex die contact, friction effects, plastic heating, die chilling and heat loss to atmosphere.

* Automatic calculations for tool motions in hydraulic, mechanical, hammer and screw presses as well as for rolling and ring rolling mills.

* Support for highly complex, segmented tool movements.

* Automatic meshing and remeshing of the workpiece model.

* Workability guide for improved process design.

IRIX version compatibility: 5.3

Mechanical CAD/Mechanical CAM

ANVIL-1000MD®

Tom Zwica
President
Interactive Design
Consultants
12721 Wolf Road
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USA
309-944-8108
309-944-6532 (fax)

ANVIL-1000MD® is a 2-D CAD system designed for mechanical design and drafting. Now in the sixth revision since its introduction in 1984, ANVIL-1000MD is known for its intuitive interface, which results in a short learning time. Combined with remarkable power, its ease of use is appreciated by infrequent users as well as the professionals who log many hours each week in front of the system. Quantity discounts are available.

IRIX version compatibility:

ANVIL-5000®

Randall Shipman
Program Manager
Manufacturing &
Consulting Services, Inc.
7560 East Redfield Road
Scottsdale, AZ 85260
USA
602-991-8700
602-991-8794 (fax)
randys@anvil5k.com

ANVIL-5000® is a modular 3-D CADD/CAM/CAE software system for mechanical engineering. Wireframe, surface and solids modeling, parametric modeling, parametric drafting, geometric analysis, finite-element pre and post-processing, and numerical control are completely integrated into one double-precision database as well as robust automated tool path verification (ANVIL-Verify). Because ANVIL-5000 is modular, users can start with a stand-alone wireframe modeling and drafting system, then grow into a networked, full-featured system without affecting their database or their initial software investment. Because ANVIL-5000 is integrated, users can access any function at any time during the work session, without having to copy, translate, or re-input data. The user interface features both icons and menus. The icons can be programmed, redesigned, or both. Multiple sets of icons can be stored for immediate recall when needed. Menus can be configured by the user, adding, dropping or re-arranging items. Custom applications written in GRAPL-IV and Extended GRAPL-IV (MCS' Applications programming language) can be added to the menus or icons and run as if they were standard functions.

IRIX version compatibility: 5.3, 6.2, Pre 5.x

ASOP©

Dave Lichtenwalner
VP, Marketing
Optimation, Inc.
300 North Osage
Independence, MO 64050
USA
816-836-2000
816-836-8589 (fax)

ASOP© selects the optimum raw material size and type for each part blank, and produces a detailed shearing/cutting plan with the lowest practical total cost to produce those parts. ASOP can handle both coil and cut-to-length raw materials.

IRIX version compatibility: 5.3, Pre 5.x

AXIOM

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816-836-8589 (fax)

AXIOM is an efficient, automatic true shape nesting system. AXIOM also minimizes labor, setup, inventory, and machine idle time. On-time fabrication of parts with orders produced as they are required (JIT manufacturing) is an essential part of AXIOM's features. AXIOM automatically nests holes within holes, finds best orientation of parts, and balances all costs to find the lowest cost solution.

IRIX version compatibility: 5.3, Pre 5.x

Mechanical CAD/Mechanical CAM

Adaptive Modeling Language (AML)

Adel Chemaly
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AML is an Adaptive Modeling Language for concurrent engineering. AML offers an advanced modeling paradigm with an open architecture targeted to enable the automation of the entire product development cycle, integrating product configuration and visualization, design and anlaysis, manufacturing and production planning, inspection and cost estimation.

IRIX version compatibility: 6.3

Advanced Computer Aided Design (ACAD)

Dave Henn
Lockheed Fort Worth Company
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USA
817-763-4560
817-777-2115 (fax)

ACAD is a full featured 3D wireframe, surface and solid modeling package with many design and analysis capabilities specifically tailored for aircraft design.

The system is capable of modeling highly complex surfaces. Its geometry engine is based on cubic Rational B-Splines. The hybrid B-Rep and CSG facetted solid modeling engine is fully integrated with the surfacing package. The surface mesher provides a high degree of control over mesh quality and density. ACAD's meshes are used extensively for CFD and RCS analysis.

ACAD offers a wide variety of tools for interfacing with other CAD and analysis packages. Output formats include IGES, Nastran, Patran, STL and a facet fileformat that has been adopted by the EMCC.

IRIX version compatibility:

Alias | Wavefront AutoStudio™

Marketing Administrator
Alias Wavefront
110 Richmond Street East
Toronto, ON M5C 1P1
Canada
416-362-9181
416-362-0630 (fax)
800-447-2542 (tollfree)
http://www.aw.sgi.com/

Alias | Wavefront AutoStudio™ takes the successful Studio technology and adds powerful functionality for designers and stylists involved in areas of vehicle design. AutoStudio includes: ClayMate™, which closes the design loop with traditional approached by allowing its users to:

1) mill a clay model using data from the Alias | Wavefront 3-D "digital prototype,"

2) modify the clay model, and 30 update surfaces in the "digital prototype" based on changes made to the clay model; ReallyReallyFastRender™, which allows one to evaluate models by moving around a scene in real-time, with realistic lighting, texturing, transparency, reflections and full scene anti-aliasing (optimized for use with the Silicon Graphics RealityEngine™ graphics system); advanced curve and surface tools, including automatic surface smoothing, the ability to draw freeform curves directly on any complex surface, and the capability to automatically reduce the data in a surface within specified tolerances.

IRIX version compatibility: 5.3

Mechanical CAD/Mechanical CAM

Alias | Wavefront Designer™

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Alias Wavefront
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416-362-9181
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Alias | Wavefront Designer™ is a highly-affordable and powerful 3-D solution for industrial design and presentation. It is used in a range of industries including consumer electronics, toys, housewares, packaging and jewelry. Designer combines the ease-of-use and creative flexibility of "digital sculpting" with seamless interfaces to downstream CAD/CAM systems for rapid prototyping and manufacturing. It provides a range of NURBS-based, variational surface modeling tools developed specifically for the creative designer. Both freeform and regularly-shaped designs can be created; 3-D surfaces can also be created from 2-D geometric primitives. Photorealistic rendering and animation help communicate designs to clients, marketing and engineering, reducing the need for physical models.

IRIX version compatibility: 5.3

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Toronto, ON M5C 1P1
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416-362-9181
416-362-0630 (fax)
800-447-2542 (tollfree)
http://www.aw.sgi.com/

Alias | Wavefront Studio™ is the world's leading 3-D system for industrial design and styling. It is used in a range of industries including consumer electronics, toys, housewares, packaging and jewelry. When combined with the 2-D capabilities of Alias | Wavefront StudioPaint™, Alias | Wavefront Studio gives manufacturers a single design environment that integrates 2-D conceptual sketching and 3-D modeling, evaluation and visualization, plus 3-D painting - with seamless integration to downstream CAD/CAM systems for rapid prototyping and manufacturing. Studio provides a range of NURBS-based, variational surface modeling tools developed specifically for the creative designer. Surface evaluation and continuity tools allow designers to ensure the manufacturability of their concepts upfront. Photorealistic rendering and animation help communicate designs to clients, marketing and engineering, reducing the need for physical models.

IRIX version compatibility: 5.3

AutoCAD® Designer

Cindy Dooling
Autodesk, Inc.
5901 Peachtree Dunwoody Road
Suite 400
Atlanta, GA 30328
USA
415-507-6532
415-507-6107 (fax)

AutoCAD® Designer is a mechanical design and drafting software. It is an affordable, parametric, features based, solid modeler and automated drafting system. Solid models are built using parametric form features rather than using traditional primitive/boolean techniques and drawings are generated automatically. Drawings and models have bi-directional associativity.

Users are mechanical customers also using AutoCAD or who want to use AutoCAD. Intended to be a highly productive design and drafting system and will improve your productivity even if you are producing simple designs.

IRIX version compatibility:

AutoSched™

Sales Department
AutoSimulations, Inc.
655 Medical Drive
Bountiful, UT 84010
USA
801-298-1398
http://www.autosim.com

AutoSched™ is a finite scheduling and capacity planning tool that helps you increase throughput, reduce in-process inventory, and increase equipment and personnel utilization. Simply provide factory and product definitions and your product requirements in data files. This data can be obtained from existing databases or spreadsheets, or you can create it specifically for AutoSched. Create a set of operating rules and begin to optimize your resource utilization. AutoSched can be integrated with MRP and shop floor controls to do on-line dispatching, or it can be used to create schedules for your next operating period.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

Bailey DCI System Six®

Bill Selph
Sr. Prod. Mgr, Display Sys
Elsag Bailey Process
Automation
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Bailey DCI System Six® is a Process Control and Information MAnagement System designed for both Continuous and Batch processes in the Chemical, Specialty Chemical, Pharmaceutical, Water and Wastewater Treatment, Oil and Gas, Pulp and Paper and Semi-conductor Industries. The Human Machine Interface uses a Silicon Graphics RISC Processor, UNIX Operating and X-Window Display Terminals. Communications between the Bailey Process Controller and Silicon Graphics Server is via a dual Ethernet TCP/IP Network. Application software for the Siliocn Graphics Server is supplied by Elsag Bailey.

IRIX version compatibility:

C-MOLD QuickFill for Pro/ENGINEER

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502-423-4369 (fax)
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http://www.actech.com

C-MOLD QuickFill for Pro/ENGINEER is a unique molding simulation tool created exclusively for the plastic part design engineer working within the Pro/ENGINEER environment. Using QuickFill, design decisions can be made to insure manufacturability while optimizing plastic part performance. Without slowing or impeding design efficiency, simulations will provide much needed information to evaluate material options, part wall thickness variations, weld line locations, part weight and part cost.

IRIX version compatibility: 5.26.1

C-MOLD QuickFill for Unigraphics

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C-MOLD QuickFil for Unigraphics is a unique molding simulation tool created exclusively for the plastic part design engineer working within the Unigraphics environment. Using QuickFill, design decisions can be made to insure manufacturability while optimizing plastic part performance. Without slowing or impeding design efficiency, simulations provide much needed information to evaluate material options, part wall thickness, weld line locations, part weight and part cost.

IRIX version compatibility: 5.26.1

C-MOLD® molding simulation software

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C-MOLD® is a CAE mold analysis software for the plastics molding industry. C-MOLD is used to create computer models of plastic components during design stage. A wide range of analyses can be run on the model to simulate the actual production of the component using injection molding, gas assist molding, co-injection molding, blow molding, reactive molding, thermoforming, and other plastic molding processes. C-MOLD is currently in use within every major segment of the plastics industry. Using C-MOLD in the design stage insures the part is manufacturable while allowing for changes to optimize product costs, process time, and material usage. Costly trial-and-error molding techniques are alleviated using C-MOLD. All major platforms for workstations and PCs are supported.

IRIX version compatibility: 5.2, 6.1

Mechanical CAD/Mechanical CAM

C3D

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C3D automatically produces high-resolution three dimensional CAD models from multiple overlapping images of objects or scenes.

Models exported in Inventor, VRML and DXF with full color texture overlay.

Applications include VR, Virtual Studio, Reverse Engineering, Automotive, Heathcare, CAD/CAM, digital special effects, museum archiving, anthropometrics.

Application details and products specification available from website. If dimensional precision is required, The Turing Institute can supply precision engineered calibration objects.

IRIX version compatibility: 5.3

CADPRESS™

Bruce Davis
Engineer
The Madison Group/
Polymer Proc. Research
Corp.
565 Science Drive
Madison, WI 53711-1070
USA
608-276-1907
608-231-2694 (fax)
**bruce@prowler.
madisongroup.com**
**http://www.engr.wisc.edu/
~gramann/**

CADPRESS© is a general purpose finite element compression molding simulation program. It is capable of calculating the mold filling, pressure and velocity distributions, fiber orientation, shrinkage, warpage, and stress fields of the part.

IRIX version compatibility:

CADRA Design Drafting®

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203-944-2020
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CADRA Design Drafting® is a 2-1/2D - 3D mechanical design system optimized for the production of complex, multi-view drawings. Cadra Design Drafting features a suite of productivity features including Quick-Dim™ intelligent dimensioning (patent pending); Quick-Hatch™ intelligent cross-hatching; Quick-Pick™ intelligent library figure selection and insertion; and Cutout™ automatic hidden line removal. FlexDesign™ applies dimension-driven and variational constraint techniques to CADRA geometry, or geometry imported from other CAD systems.

An optional translator for CADAM® databases, widely recognized as the most complete and accurate, migrates users successfully from resource-hungry mainframe environments. Translators for Computervision CADDS®, CATIA®, DWG, DXF™ and IGES formats are also available.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

CADRA® NC™

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CADRA® NC™ is the powerful numerical control programming solution that is completely compatible with the manufacturing equipment and processes in use today, protecting existing investments in hardware, software, data, and human resources. Cadra NC features interactive, on-screen menus and familiar programming techniques: very short learning curve, less time wasted, more productivity -- and packs all the power necessary to machine even the most complex parts. Cadra NC includes full 2 1/2-axis programming capabilities for nearly all 2- or 2 1/2-axis machine tools, including milling machines, wire EDMs, and lathes. No matter what's being manufactured, Cadra NC provides the tools to get the job done right -- the first time.

IRIX version compatibility:

CADRA® Solids™

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CADRA® Solids™ is a leading production-oriented solid modeling solution furnishing easy-to-use modeling tools and direct 3D/2D integration...and something unique in the industry: modeling operations that provide a natural, intuitive approach. Although the traditional solids features are all included -- solid primitives, Boolean combinations, sweep, skin, revolve, and extrude operations -- designers don't have to use them. CADRA Solids provides 3D modeling tools that offer straightforward 2D/3D integration along with many easy-to-use features that are essential for casual users -- because CADRA Solids is the first solid modeler optimized for use in the design documentation phase of the product development cycle.

Call for availability

IRIX version compatibility:

CADfix

John Rawlinson
General Manager
FEGS Ltd.
5 Coles Lane
Oakington
Cambridge, CB4 5AF
UK
011-44-1223-237
011-44-1223-234 (fax)
http://www.fegs.co.uk/

CADfix is a set of interactive tools and batch MACROS for fixing geometry exchange problems in CAD/CAM/CAE including:

repairing IGES deficiencies

raising wire frame and surface models to solid models

healing solid models

modifying CAD geometry for engineering analysis, manufacturing, etc

CAD to CAD data exchange

IRIX version compatibility: 5.3

CAM-APT-SURF®

Frank Delli Colli
Marketing Comm Manager
ICAM Technologies
Corporation
1900 Sources Boulevard
Pointe-Claire, PQ H9R 4Z3
Canada
514-697-8033
514-697-8621 (fax)

CAM-APT-SURF® is ICAM's APT NC programming language. It offers extensive geometry definitions and great tool control. CAM-APT-SURF processes both sculptured surface and traditional 2- to 5-axis APT programs for all types of NC machine tools.

Features include a full range of both analytic and nonanalytic geometric definitions, full 5-axis and sculptured surface tool path processing, automatic regional milling of sculptured geometry, extensive error checking facilities and diagnostic message generation, direct interfaces to graphic verification systems for sculptured geometry and tool motions, and a full range of user-selectable run-time options.

IRIX version compatibility: 5.3

Mechanical CAD/Mechanical CAM

CAM-POST®

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CAM-POST® is an interactive postprocessor generator that interfaces to all major CAD/CAM systems and APT processors. It is a self-teaching postprocessor development tool that reduces the task and cost of interfacing CAM systems with the NC/CNC equipment they control. CAM-POST, with its "expert system" driven questionnaire, guides the user through the creation of a postprocessor.

CAM-POST supports all types of NC/CNC machines with up to 14 axes of control. All primary, secondary, neutating and extending axes are supported automatically. Postprocessors can be created for milling machines and machining centers (2 to 5+ axes), turning centers and lathes (2 to 5 axes), C-Y lathes (mill-turn), wire EDMs (2 to 6 axes), torches, punch presses, hybrid machines, etc.

IRIX version compatibility: 5.3

CAMAND® Machinist

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USA
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http://www.camax.com

CAMAND® Machinist (Version 9.0 and higher), the most widely used configuration of CAMAND software, offers NC programming for full 3-axis simultaneous machining, with full geometry modification and creation capability. It includes all the combined functionality of the CAMAND Modeler and CAMAND NC, enabling users to generate their own models, parts, molds and dies, or to import models from other systems for the purpose of direct machining, rapid prototyping, or the creation of molds and dies from the imported part models. Primary users are mold and die making (molding, stamping, forging, casting) and direct CNC machining sectors of consumer products, sporting goods, general machinery, automotive and aerospace. Runs on SGI with IRIX 5.2 and 5.3.

IRIX version compatibility:

CAMAND® Modeler

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CAMAND® Modeler (Version 9.0 and higher) is used for creating manufacturable models or importing and modifying design models for manufacturability. It is geared for needs of part and component manufacturers in consumer products, tool and die, mold, automotive and aerospace industries. Using Powerful 3-D NURBS surfaces, the Modeler has constructive surfaces, as well as advanced, free-form lofted, mesh, swept, blended, fillet, offset and B-surfaces, plus surface to B-surface conversion. It includes wireframe modeling, a shading module, bidirectional IGES or VDA-FS translator, DFX and U.S. automotive translators, moldbase and documentation applications. Used in manufacturing or rapid prototyping environments, and as support for seats of CAMAND NC CAM packages. Runs on SGI with IRIX 5.2 and 5.3.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

CAMAND® Multax

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CAMAND® Multax (Version 9.0 and higher) is for the most demanding of CNC programming environments requiring 4 or 5 axes in simultaneous motion. Multax includes the functionality of CAMAND Machinist, plus NC programming, postprocessing and dynamic machine-tool simulation for 5-axis CNC's, including wire EDM and laser-cutting machines, mills and machining centers. CAMAND Multax is ideal for manufacturers who have been using the APT (automatically programmed tool) programming language or APT-based systems, but who need to greatly increase productivity through the reduction of programming time, testing and on-machine prove-out. Primary users are manufacturers of directly machined complex and "opposite-hand" parts in multiple industries, especially aerospace. Runs on SGI with IRIX 5.2

IRIX version compatibility:

CAMAND® NC

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CAMAND® NC (Version 9.0 and higher) is an extension of most popular CAD systems, typically solid modelers with weak or lacking NC programming functions. CAMAND NC includes all CAMAND Partmaker, plus basic surface modeling, NC programming and postprocessing, and dynamic machine-tool simulation, for surface machining with 3-axis simultaneous motion and 4th and 5th axis positioning. Surface modeling and editing includes ruled, tabulated, revolved and patch surfaces, which enable users to complete or modify imported models for manufacturability, or to use the models to create dies and molds. Options, including advanced NURBS surfaces, enable configuration for higher-level manufacturing. Runs on SGI with IRIX 5.2 and 5.3.

IRIX version compatibility:

CAMAND® Partmaker

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CAMAND® Partmaker (Version 9.0 and higher) addresses the general machining requirements of production piece-part manufacturers, whose work typically involves 2-1/2 axis machining and 3-axis curve machining, with rotation of the fourth or fifth axis for positioning. Partmaker includes a graphic user interface, wire frame modeling, a shading module for visualization, one bidirectional translator (IGES or VDA-FS), DXF input translator, U.S. automotive translators, moldbase design database, dimensioning, a plotter interface library, and NC programming and postprocessing for drilling, 3-axis curve machining, pocketing and profiling. Multiple optional modules enable customizing configurations for special manufacturing needs. Runs on SGI with IRIX 5.2 and 5.3.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

CAP

Calvin Mitcham
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USA
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CAP is a 3-D finite element analysis program that simulates solidification processes, specifically for the casting industry. It can be used for various casting processes with multiple mold and casting materials. CAP can also be used to optimize casting geometry in order to improve part integrity and reduce costs. CAP requires reduced computer resources so it can be effectively applied to real-life casting concerns. Very large, complex models can be efficiently analyzed on moderate workstations. In addition, CAP can communicate with many standard finite element file formats for pre- and post-processing.

IRIX version compatibility: pre-5.x, 5.x, 6.x

CATIA/CADAM Solutions

Jean-Michel Morin
Director, Market Support
Dassault Systemes
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France
33-1-40-99-41-30
33-1-40-99-43-76 (fax)

CATIA/CADAM Solutions offers a comprehensive set of computer-aided design, manufacturing and engineering solutions that support integrated product development processes and help optimize teamwork. These Solutions include leading-edge applications for task optimization and are based on an evolutionary architecture which enables customers growth.

IRIX version compatibility:

CIMPro-CATIA/ProEngineer Direct Interface

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President
Cimsoftek, Inc.
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Paramus, NJ 07652
USA
201-986-7860
201-986-7858 (fax)
cimsoftek@delphi.com
http://www.cimsoftek.com/

CIMPro is a direct data translator for converting 3D product information between CATIA and Pro/ENGINEER CAD/CAM products. The software runs on a variety of platforms and does not require a CATIA license to execute. It is ideal for suppliers and vendors who work with Pro/ENGINEER and have to deal with CATIA data.

IRIX version compatibility: 5.3

CIMView+

Chandresh Shah
Dir, Sales & Marketing
Cimsoftek, Inc.
299 Forest Avenue
Paramus, NJ 07652
USA
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201-986-7858 (fax)
info@cimsoftek.com
http://www.cimsoftek.com/

CIMView+ reads native CATIA data directly from CATIA data structure.

CIMView is a platform independent CATIA database viewer. CIMView+ does not require CATIA license to execute. It displays CATIA geometry precisely and has the same look and feel as the original CATIA geometry, including all the same colors and basic line fonts.

CIMView+ is a low cost, easy to use solution. It provides a simple and natural user interface with interactive, context sensitive help.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

COALCAD

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President
Carlson Software
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Maysville, KY 41056
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606-564-5028
606-564-6422 (fax)

COALCAD works in the Unix environment on Silicon Graphics work stations. It requires AutoCad Release 12 for the Silicon Graphics platform, but also works in DOS and Windows. COALCAD enables the input of geologic core hole information and will produce quality and quantity estimates of any strata inside any polyline perimeter. COALCAD covers advanced underground mine mapping and surface mine applications such as pit and contour mine design, stockpile volume estimation, outcrop computation, strip ratio analysis and pond design. COALCAD is an industry standard and is used by over 85 U.S. coal companies.

IRIX version compatibility:

COAch for Pro/Engineer

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COAch is an interactive Computer-Based Training product designed to provide a comprehensive and affordable training program for Pro/Engineer™ users in their actual CAD environment. This self-paced, on-screen training tool enables engineers, designers, drafters and NC programmers to customize their training experience by following the learning sequence best suited to their individual needs.

Working in an interactive environment, students are introduced to new concepts, work through demonstration and practice exercises, answer test questions, and complete projects using pre-defined models.

IRIX version compatibility: 5.x, 6.x

CSA/GENSA™

Tom Forrest
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818-707-7722 (fax)
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http://www.csar.com

CSA/GENSA™ is a state-of-the-art nonlinear FEA software product with advanced algorithms for nonlinear anlyses and compatibility with CAS/NASTRAN™. CSA/GENSA™ provides both accuracy of colution and the high performance you expect from CSAR products and offers the easiest upgrade path from linear analysis; geometric nonlinearities, including large strain, large deflections, contact, sliding, friction, and penetration; fully nonlinear material properties including elastic-plastic, viscoelastic and hyperelastic, soils, rock, concrete, fiber, foam, etc.

IRIX version compatibility: 5.x, 6.x

CSA/NASTRAN™

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http://www.csar.com

CSA/NASTRAN™ is a state-of-the-art FEA software product used by leading automotive and aircraft companies, space centers and their suppliers worldwide. CSA/NASTRAN™ is uaed by designers and analysts for stress analysis; for vibration modes and mode shape analysis; for buckling, nonlinear gap element, dynamic response in the frequency and time domain, heat transfer, flutter and aeroelasticitycy analyses; and for design sensitivty and optimization analyses of almost all structures and structural components analyzed in all segments of the MCAE marketplace.

IRIX version compatibility: 5.x, 6.x

Mechanical CAD/Mechanical CAM

CT-Modeller®

Bart Swaelens
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Belgium
(32) 16 298 364
(32) 16 298 319 (fax)
soft@materialise.be
http://www.materialise.be

CT-Modeller® is a software package that converts CT images into data for rapid prototyping machines (that is, stereolithography). It allows users to produce medical models within a few hours after a patient has been scanned. The package can be used by radiologists in collaboration with a rapid prototyping service bureau.

IRIX version compatibility: 5.3, Pre 5.x

CatVOX

Michael Crowe
Tecoplan Informatik, Inc.
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Troy, MI 48083
USA
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810-524-4914 (fax)
m_crowe@msn.com
http://www.tecoinf.de/

Digital mock-up in the Virtual Workshop can iron out design problems at an early stage. It makes sound economic sense and it's an essential tool for product designers everywhere.

Software from TECOPLAN INFORMATIK facilitates tremendous fast and completely three-dimensionally reviewed assemblies of highly complex products such as aircrafts or automobiles - all components are automatically checked for collisions, contact surfaces and minimum clearances (optional with respect to ceratin tolerances). Dynamic assembling allows the simulation and check of parts in movement as well as the simulation of mounting paths. Photorealistic visualization of the individual components clearly identifies problem zones during on-screen assembly. Utilizing the CATIA software environment and nature data formats.

IRIX version compatibility: 5.x, 6.0, 6.2, 6.1

Centric Engineering Systems Spectrum

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Systems, Inc.
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http://www.centric.com/

Centric develops and markets Simulation Based Design products. This new generation of Mechanical Design Automation products is still built on a Full Spectrum Simulation foundation, incorporating multiphysics mechanics, advanced numerical methods and scalable processing. Centric's tools allow engineers to comprehensively simulate the behavior of products during the design process, significantly improving design and manufacturing productivity. The company is managed by experienced leaders from the design automation and computer industries, and is backed and advised by respected technology investors.

IRIX version compatibility: 5.x, 6.x

Mechanical CAD/Mechanical CAM

CimStation Inspection™

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Technology, Inc.
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San Jose, CA 95134
USA
408-474-3227
408-432-3490 (fax)
Lisa.Lambro@adept.com
http://www.silma.com/

CimStation Inspection™ is a powerful 3D graphics simulation and programming tool used to create simulate and optimize programs for Coordinate Measuring Machines (CMMs). Using CimStation Inspection will shorten the CMM programming cycle, increase CMM productivity and eliminate program errors and probe crashes.

CimStation Inspection facilitates concurrent engineering by enabling manufacturers to create CMM programs from CAD data long before the physical part exists or the machine is purchased.

As programs are created and edited, users visualize the CMM, probes, parts and fixtures in real-time 3D graphics. Simulations can be replayed at any speed and viewed from any angle or distance. CimStation Inspection enables programmers to find and correct program errors before programs are downloaded to the shop floor, freeing CMMs for production.

IRIX version compatibility:

Cimagrafi

Peter Bolger
Vice President, Sales
Cimatron Technologies
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Suite 200
Burlington, ON L7N 3N6
Canada
905-639-0802
905-639-9315 (fax)
http://www.cimatron.com/

Cimagrafi fulfills all the needs of high precision engraving, marking, sign making and vinyl cutting. The complete Cimagrafi package includes a Draft module, an auto-trace module, a text module, and milling utilities such as offset, area clearance, 3-D x-cornering, and 4th and 5th axis support. Traditional CAD/CAM programs are limited in their handling of special geometries, such as text in various fonts, images based on optical scanner output, and free-hand sketching. Cimagrafi fills this gap - supplying quick and efficient tools. In addition, Cimagrafi's sophisticated software is highly accurate, yet still user-friendly enough for the typical "non-programmer" to master.

IRIX version compatibility:

Cimatron

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905-639-9315 (fax)
http://www.cimatron.com/

The Cimatron system automates the entire mechanical engineering process, delivering the most advanced tools for 2-D and 3-D design and drafting, solid modeling, advanced surface modeling, FEM, and NC machining. Its single, unified database provides complete integration and data integrity, with changes reflected automatically throughout the entire design and manufacturing process. Cimatron's modular structure makes it fully customizable, while interfaces to industry standard formats such as IGES, DXF, and VDA, and to dedicated formats, such as Pro/E's NEU, accurately translate data form almost any system. Moreover, the system's consistent, intelligent user interface makes it extremely easy to learn and use.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

Cimplex Manufacturing Analyst©

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San Jose, CA 95110
USA
408-969-9800
408-969-9806 (fax)
are@cimplex.com

Cimplex Manufacturing Analyst© is a family of advanced manufacturing applications designed to substantially reduce time to market and raw material use. Based around "manufacturing features," the applications receive accurate design/manufacturing information from the most popular solid design systems, including Parametric Technology, EDS/Unigraphics, Catia, and ComputerVision. These applications read all direct design/manufacturing information such as surface finish and tolerance, then attach proven manufacturing procedures to the design data. Based on feature recognition, the system automatically recalls knowledge and automatically selects tools and procedures, then automatically produces toolpaths. Combined with on-line help/assistance, these procedures are modifiable by the user.

IRIX version compatibility: 5.3, Pre 5.x

Cimplex NC Verification©

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Cimplex NC Verification© (NCV) visually simulates the operation of a 3- to 5-axis milling machine. NCV is used by manufacturing engineers and NC programmers to verify programs generated by all NC programs, including Cimplex Manufacturing Analyst©. NCV displays the milling machine's cutter as it follows the NC program to produce a machined part. The programmer can observe errors in programming that can result in an incorrectly manufactured part or damage to equipment before production. NCV reduces the cost and time to market by selecting the most efficient programming to improve product quality. NCV is an excellent NC programmer training tool.

IRIX version compatibility: 5.3, Pre 5.x

Mechanical CAD/Mechanical CAM

Clarus CAD Real Time Link

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50
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46-31-703-51-20 (fax)
marketing@clarus.se
http://www.clarus.se

Clarus CAD Real-Time Link opens the world for non-programmers to convert CAD data into digital mock-ups, used for design evaluation, assembly studies, packaging, visualization of numerical data etc.

With Clarus CAD Real-Time Link the user has the possibility to import NURBS surfaces and interactively optimize them for real-time use all through the Graphical User Interface. The intelligent algorithms for reduction of polygons is one of the features making Clarus CAD Real-Time Link a unique product. Clarus CAD Real-Time Link supports the majority of formats used in todays design and CAD/CAM systems.

Clarus CAD Real-Time Link's features include:

Conversion from Alias, IGES, Open Flight, DXF, Inventor, VRML, etc.

Conversion to OpenFlight, Inventor, VRML, FHS GUI

(Graphical User Interface) for interactive optimization of models during the translation process

Integrated real-time previewer

Tessellation of trimmed NURBS surfaces

Intelligent reduction of polygons

Generation of multiple LODs (Level of Details) directly from NURBS

Dynamic Coordinate Systems - DCS

Gap elimination

Interactive texturing Material mapping

Real-Time statistics (polygon count, pixel depth, polygon density, etc.)

Translation of colours and shaders

Radiosity

IRIX version compatibility: 5.x6.x

CoCreate ME10

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http://www.cocreate.com

Even though ME10 is the automatic annotation tool for use with CoCreate's SolidDesigner 3D solid modeling tool, it is being used as a stand alone 2D Design and Drafting tool by over 80,000 users world wide. These users love ME10 because it thinks like they do, it is very easy to customize, and it has the most features to help them automate their work. For example, with Dimension Advisor, ME10 can automatically completely dimension any drawing, no matter how complex. With Design Advisor, users are led through the creation of parametric parts and assemblies, which can then be easily modified by changing the dimensions. ME10 runs on Windows platforms as well as SGI boxes, so you can have a mixed environment. ME10 can now support scanned in drawings, or even pictures, to merge with its standard vector drawings.

ME10 version 8.0 offers full compatibility with ME10 version 1.0, so your investment is always protected. For more details please check us out at http://www.cocreate.com.

IRIX version compatibility: 5.2, 6.2

Mechanical CAD/Mechanical CAM

CoCreate SolidDesigner

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You should consider SolidDesigner for 2 important reasons:

1) It is the ONLY solid modeler on the market with Dynamic Modeling capabilities. You need to understand how Dynamic Modleing could drastically cut your design cycle time.

2) It is the foundation for the CoCreative Environment, which will allow you to have Shared Space Design over the Internet and involve remote design teams, your suppliers, even your customers in real time solid model designing.

SolidDesigner is peaked for users in the Electronics Industries segment and the Machine Design segment. We have developed tight links for applications normally used in these design environments and SolidDesigner is rapidly becoming the CAD system of choice in these markets. For success stories on how companies are using SolidDesigner, please see us on our Web Site, http://www.cocreate.com.

The CoCreative Environment can provide your company a significant competitive advantage and the core elements are CoCreate SolidDesigner and CoCreate WorkManager. Please check the listing for WorkManager as well.

IRIX version compatibility: 5.2, 6.2

Computervision® CADDS® 5 Software

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Program Manager
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http://www.cv.com/

Computervision® CADDS® software offers a broad range of interoperable applications for design, drafting, analysis, and manufacturing. A unique Hybrid Modeler supports geometric modeling using explicit, parametric, and variational geometry on solid, surface, and wireframe models. CADDS 5 software provides total product modeling supporting concurrent engineering. All product information is captured in a single model that is shared and built upon by all members of the design team. Assembly management features facilitate large scale project integration.

Computervision is the leading supplier of mechanical CAD/CAM and Engineering Data Management software, as well as consulting and support services. The company has an installed customer base of over 180,000 seats worldwide.

IRIX version compatibility:

Contour Tools©

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Contour Tools© allow visualisation, manipulation, editing and fixing of contours. In addition, this software package has an interactive sliciup algorithm, as well as an automatic support generation software for Rapid Prototyping machines.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

CopyCAD

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Delcam International plc
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UK
44-121-766-5544
44-121-766-5511 (fax)
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http://www.delcam.com

CopyCAD provides a set of easy to use tools for the rapid creation of complex CAD surfaces from large sets of digitized data produced by coordinate measuring machines, tracing machines or laser scanners. It gives the user complete control over the selection of surface boundaries and then automatically generates smooth, multi-patch surfaces to the specified tolerance.

Applications include the creation from physical models of CAD models for analysis and engineering operations, updating of CAD models to reflect changes made to existing parts or prototypes, archiving of legacy models as CAD files, and capture of data for computer visualization and animation.

IRIX version compatibility: 5.3, 6.0, 6.2, 6.3

CyberCAD™

Frederick L. Beckner
President
Cyberdynamics, Inc.
1860 Embarcadero Road
Suite 155
Palo Alto, CA 94303-3308
USA
415-856-6188
415-856-6293 (fax)
fbeckner@cyberd.com

CyberCAD™ is a GUI CAD application used to build, view, modify and evaluate high-accuracy ACAD facet and IGES curved-surface models. Emphasis is placed on perspective rendering fidelity and large models (300,000+ facets). Full-featured visualization capabilities can predict rendered model images from the same perspective as actual photographs. Model validation is performed by overlaying and comparing these images. Unique rendering algorithms extract important features for comparison. Extensive model editing features allow modification articulation, addition and removal of facets and parts, and merging multiple models. CyberCAD is being used by the USAF and contractors to validate state-of-the-art CAD models of military aircraft.

IRIX version compatibility:

DESIGN MANAGER©

Steven Talbott
Marketing Communications
CADCentre, Ltd.
High Cross
Madingley Road
Cambridge, CB3 0HB
UK
44-1223-556655
**http://www.cadcentre.co.
uk**

DESIGN MANAGER© is the system that bridges engineering and detailed design, by passing information electronically from an engineering group using CADCentre's PEGS© to the design team using PDMS©, CADCentre's plant design management system. Because information is passed electronically from PEGS into DESIGN MANAGER, there is no re-keying of that information, eliminating manual errors requiring costly correction and re-checking.

IRIX version compatibility: 5.2, 5.3, 6.2

DESIGNBASE™

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DESIGNBASE is an object-oriented solid and surface modeling software component used by both commercial and end-user software developent organizations worldwide as a foundation for modern CAD and related applications. DESIGNBASE toolkit assists CAD/CAM vendors and user organizations in developing their own 3D modeling systems by giving developers access to state-of-the-art technology. Intended to shorten development times, DESIGNBASE lets users focus their development resources on software applications rather than the underlying modeling technology.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

DIGIBOT II - 3D Laser Digitzing System

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The DIGIBOT II - 3D Laser Digitizing System is the only fully automated, protable, non-contact, 4-axis digitizing solution on the market today. Utilizing technology, the DIGIBOT II gives you unparalleled speed, high accuracy, and exceptional ease of use in any laboratory, state-of-the-art Graphic User Interface, you can quickly choose from a wide variety of scanning options, visualization modes, data manipulation functions and standard output formats for downstream CAD/CAM rapid prototyping, visualization, animation, or analysis processes.

IRIX version compatibility: 6.x

DUCT5

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DUCT5 is a 3-D modeler for the design and manufacture of complex shapes typified by plastics, ceramic, rubber, and glass moldings and by metal castings, forgings, and pressings. The product is aimed primarily at product designers and toolmakers and enables a complete surface definition to be created on-screen from which machining data can be automatically generated for mold or die cutting on a CNC machine tool. Integration of design with manufacture eliminates traditional model making, improves accuracy, and reduces lead times.

IRIX version compatibility: 5.3, 6.0, 6.2, 6.3

DUCTdesigner

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DUCTdesigner is a powerful design tool that has been developed specifically for designers who need to style products incorporating complex shapes, produce realistic images of their designs, and generate computer models for prototyping and tooling manufacture. It is especially useful for the design of any products including curved surfaces which cannot be accurately or unambiguously represented using two-dimensional systems, such as automotive and aerospace components, consumer electronics, footware, packaging, toys, sanitary-wear, sports equipment, furniture and tableware.

IRIX version compatibility: 5.3, 6.0, 6.2, 6.3

DUCTmachinist

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DUCTmachinist is the key to advanced 3-D Computer-Aided Manufacturing at a low cost. Combining the core modeling and machining modules of DUCT5, DUCTmachinist generates accurate NC data for even the most complex components.

DUCTmachinist has been specifically developed for the makers of moulds, dies and patterns. With DUCTmachinist, you will be able to: increase productivity through better utilization of CNC machine tools; reduce lead tunes by eliminating the need for physical models and copy milling; improve quality by combining CAM and CNC, which is more accurate than conventional methods.

IRIX version compatibility: 5.3, 6.0, 6.2, 6.3

Mechanical CAD/Mechanical CAM

DataSculpt® Scan Editing Software

Gary Hilgers
National Marketing Mgr.
Laser Design, Inc.
9401 James Avenue South
Suite 162
Minneapolis, MN 55431
USA
612-884-9648
612-884-9653 (fax)

DataSculpt®, a powerful scan data editing software package developed by Laser Design, allows users to quickly and easily edit and digitized data from a variety of: lasers, touch probes, vision systems, CT Scan, etc. Upon manipulation of the digitized data, DataSculpt® can either 1) output toolpath data for moldmaking purposes; 2) output surface-ready digitized points to the Users CAD/CAM system; 3) perform inspection or quality assurance functions; or 4) output .STL files for rapid prototyping purposes.

DataSculpt® gives the operator the ability to edit, smooth, filter, reorganize, trim and analyze the scan data. Software utilities include bi-directional IGES, user-customizable universla post processors, user-definted icons and run-files.

IRIX version compatibility: pre-5.x, 5.x, 6.x

Deneb/ERGO

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Auburn Hills, MI 48321-4687
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810-377-6900
810-377-8125 (fax)
marketing@deneb.com
http://www.deneb.com/

Deneb/ERGO is an interactive, 3-D graphic simulation and ergonomic analysis tool for ergonomic assessment and task analysis. It provides an easy-to-use human motion programming interface for rapid prototyping of human motion within a work area. This interface enables the user to design and/or set up the motion sequences for the workers in the workcell using the graphical programming paradigm. In this paradigm, a motion sequence consists of an ordered collection of postures. To define a posture, the user manipulates the various limbs by a combination of forward kinematics and inverse kinematics. If the posture exceeds the reach of the arm, the body inverse kinematics solution incorporates torso bending. The arm inverse kinematics looks at neurophysiology studies to put the elbow in a preferred posture. The motion interface provides relative part programming to locate moving parts in the workcell.

IRIX version compatibility:

Design Editor

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To address the needs of other design intensive industries, such as watch, tools, furniture, appliances, Design Editor is developed to facilitate artistic industrial designers to maximize their time efficiency performance. Design Editor combines easy-to-use operation and designers' polished features to meet the market demand. It can integrate with other CAD/CAM systems, provide real-time interaction, 3-D models, design library and connect to mechanic output devices for production.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

DeskArtes Rapid Tools

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DeskArtes Rapid Tools is a set of utilities for rapid prototyping users. They check the topology of an IGES or VDA-FS model, correct gaps and other design errors automatically and interactively, remove multiple faces and detect other errors before converting it into STL format.

Due to the graphical user interface it is easy to locate and correct the problems in the model before sending it off to the rapid prototyping machine. Additional modules for the offseting, slicing and support structures of STL models are available.

IRIX version compatibility: 5.3, 6.1, 6.2 Certified, 6.3 Certified, Pre 5.x

DeskArtes™ Modeler and Visualizer

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DeskArtes is a tool for the industrial designer. It includes a free-form surface modeler, a photorealistic visualizer and interfaces to other CAD/CAM programs and rapid prototyping.

Product design has never been easier. Construct the shape with just a few curves to define the outlines. Trim and join surfaces to each other with smooth blends. Immediately visualize the textured model with fast shading or interactive ray-tracing. When you're ready for manufacturing, easily transfer the design geometry to rapid prototyping and CAM systems.

DeskArtes version 3.3. runs under the Motif user interface on SGI workstations, including the Indy.

IRIX version compatibility: 5.3, 6.1, 6.2 Certified, 6.3 Certified, Pre 5.x

DigiCAM

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DigiCAM™ provides digitizing and CAD/CAM in one powerful package. DigiCAM gives all the benefits of computerized digitizing: accelerated reproduction of fine detail from the most complex shapes and designs, greater flexibility than mechanical copy milling, ability to scale and merge models; plus the added features of CAD/CAM: ability to combine digitized data with data from CAD models, automatic conversion of model shape to mold cavity, and generation of accurate NC data from rough and finished machining of models or tooling.

IRIX version compatibility: 5.3, 6.0, 6.2, 6.3

Draft

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Cimatron Draft automatically projects views and details from your 2-D or 3-D model at any projection angle. Features include 2-D and 3-D editing, automatic calculation of true dimensions, inclusion of splines and other curves in hatched contours, and automatic boundary calculation for open curves. Draft also automatically generates Bills of Material, and non-geometric information may be attached to geometric data for reporting purposes. Draft shares the Cimatron system's single, unified database. Because all entities are fully associative to the geometry, geometric changes are reflected in all drafting entities. Associativity is also mantained within groups and catalogs.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

EMS Cornerstone

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205-730-3453 (fax)
****
**http://www.intergraph.
com**

A well-rounded, highly functional mechanical design package, EMS Cornerstone provides robust tools for modeling and detailing.

The package offers complete functionality for precise 3-D variational design, including feature-based modeling techniques for constructing thin-wall solids, rounds, and chamfers. Bi-directional associativity between the 3-D computer model and the detail drawing ensures accurate, up-to-date representation of the design. In addition, EMS Cornerstone features industry-standard dimensioning, associative section views, geometric tolerances, surface finish annotations, and weld symbols.

IRIX version compatibility:

EMS Fabricator

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****
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com**

EMS Fabricator is a complete "model to metal" system for designing and fabricating mechanical parts, sheet metal parts and assemblies. This value-priced product combines the modeling capabilities of EMS Lite with the sheet metal design capabilities of I/FOLD. When combined with the 2-axis machining capabilities of I/PUNCH or I/BURN (purchased separately), EMS Fabricator is an attractively priced system for sheet metal design and fabrication applications as well as parametric and variational solid modeling, design and drafting for machine and sheetmetal parts. In addition, it includes interactive and automatic flat pattern development for design with geometry created within the EMS Fabricator package or any of the EMS family of design products, as well as with geometry imported through industry standard formats such as DXF.

IRIX version compatibility:

EMS Lite

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**http://www.intergraph.
com**

EMS Lite offers high-performance solid modeling and drafting tool at a value price for mechanical design engineers. Tailored for parametric, feature-based solid modeling, EMS Lite provides leading-edge capabilities for profile sketching, design constraints specification, solid geometry creation, feature modeling and design modification. EMS Lite includes a comprehensive detailing and drafting system. Bi-directional associativity between the 3-D model and the detail drawing ensures accurate, up-to-date representation of the design. In addition EMS Lite features industry-standard dimensioning, associative section views, geometric tolerances, surface finish annotations, and weld symbols.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

EMS Machine Shop

Kim Corbridge
Product Mktg Manager
Intergraph Corporation
MS GD 3000
Huntsville, AL 35894-0001
USA
205-730-3701
205-730-3453 (fax)
****
http://www.intergraph.com

EMS Machine Shop is a complete "model to metal" system for designing and producing mechanical parts and assemblies. This value-priced product combines the modeling capabilities of EMS Lite with the manufacturing capabilities of I/MAXMILL to create an attractively priced system for design and manufacturing applications. EMS Machine Shop provides a complete associative, parametric and variational solid modeling environment for design and drafting of machine and sheet metal parts. In addition, EMS Machine Shop includes manufacturing capabilities for creating 2.5 to 5-axis toolpaths from geometry created within the EMS Machine Shop package or any of the EMS family of design products, as well as from geometry imported through industry standard formats such as IGES and DXF.

IRIX version compatibility:

EMS PowerPak

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USA
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****
http://www.intergraph.com

EMS PowerPak is a high-performance, comprehensive toolset for mechanical design and engineering. The system includes variational and associative solids modeling, surfacing, detailing, drafting, properties analysis, and productivity extensions in a powerful and versatile master package. Geared to engineers, designers and drafters, EMS PowerPak simplifies design creation and modification. High-performance functionality enables users to create precise 3D computer models with tools for variational solid modeling, advanced feature-driven geometry, and complex NURBS (nonuniform rational B-spline) surfaces. Using capabilities in EMS PowerPak for analyzing geometric properties, interference, and tolerances, users can optimize designs for efficiency and performance.

IRIX version compatibility:

EMS ToolShop

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****
http://www.intergraph.com

EMS ToolShop is a complete "model to metal" system for designing and producing mechanical parts and assemblies. This value-priced product combines the modeling capabilities of EMS PowerPak with the manufacturing capabilities of I/MAXMILL to create an attractively priced system for design and manufacturing applications. EMS ToolShop provides a complete associative, parametric and variational solid modeling environment for design and drafting of machine parts, plastic and cast parts, sheetmetal parts and parts including complex functional surfaces as well as assemblies of these parts. In addition, it includes manufacturing capabilities for creating 2.5 through 5-axis toolpaths from geometry created within the EMS ToolShop package or any of the EMS family of design products, as well as from geometry imported through industry standard formats such as IGES and DXF.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

EUCLID QUANTUM

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Product Manager
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33-1-69-82-26-28 (fax)
e-david@paris1.matra-dtv.fr
http://www.matra-datavision.fr/

Matra Datavision announced the worldwide availability of EUCLID QUANTUM, a revolutionary CAD/CAM/CAE and PDM system based on a completely new object-oriented architecture and designed for optimal productivity, openness, and expandability. EUCLID QUANTUM represents the concrete confirmation of Matra Datavision's technological leadership and is a major step forward in the company's strategy of conquering an even stronger market position.

The exceptional power and flexibility of EUCLID QUANTUM derive from CAS.CADE, Matra Datavision's advanced development platform. CAS.CADE brings robust, object-oriented modeling toolkits and built-in modularity to the new software. As a commercially available software development platform, CAS.CADE is used increasingly worldwide for industry-specific applications, commercial software, and technological applications.

Four complete engineering domains linked by a Web-enabled desktop:

EUCLID QUANTUM includes four application domains: EUCLID DESIGNER for outstanding design performance, EUCLID ANALYST for global design optimization, EUCLID MACHINIST for feature-based manufacturing, and EUCLID DESIGN MANAGER for simplified management of parts, assemblies, and processes. These applications are linked by a Web-enabled desktop and treat the electronic data as a consistent, feature-based technological model.

IRIX version compatibility:

EUCLID3

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http://www.matra-datavision.fr/

With EUCLID3, designers and manufacturing engineers describe products with a combination of high performance solid, surface, and parametric techniques, producing a single model that serves as the basis for all product development activities. In addition to comprehensive modeling functions, EUCLID3 provides full drafting capabilities; integrated analysis tools including finite element modeling analysis; numerical control manufacturing; and specific applications to address the needs for sheet metal design and manufacturing, and for the mold industry.

The EUCLID3 approach helps each department work concurrently on a single, integral, fully distributed object-oriented database, and contributes to a more structured and efficient production process by sharing rather than duplicating information.

IRIX version compatibility:

FDM® 1650, Genisys™

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Strataysy manufactures FDM rapid prototyping systems and Genisys 3D printers. These environmentally safe systems create 3D models and prototypes from 3D CAD drawings. Any manufacturer of a tangible product can benefit from using these systems, saving as much as 80-90% in product development costs. FDM systems use a variety of materials, including ABS, medical-grade ABS, investing casting wax and a new line of elastomers. ABS prototypes can be subjected to functional testing. Genisys 3D printer is a design tool for verifying concepts early in the product development cycle. Genisys 3D prints are built in a durable polyester compound.

IRIX version compatibility: 5.3, 6.2

Mechanical CAD/Mechanical CAM

FEGS MEDIAL OBJECT COMPONENT

John Rawlinson
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FEGS Ltd.
5 Coles Lane
Oakington
Cambridge, CB4 5AF
UK
011-44-1223-237
011-44-1223-234 (fax)
http://www.fegs.co.uk/

A software module that can be embedded into applications to provide the calculation of the medial object of an arbitrary 3-D solid or 2-D surface.

IRIX version compatibility: 5.3

FEMB Finite Element Model Builder

Demetrios Stathopoulos
FEMB Product Manager
Engineering Technology
Associates, Inc.
1100 East Mandoline Drive
Suite B
Madison Heights, MI 48071
USA
810-588-9010
810-588-9014 (fax)
demetri@eta.com

FEMB (Finite Element Model Builder) is a finite element pre- and postprocessor for creating and interpreting structural analysis models. Highly regarded throughout the automotive industry, FEMB offers features such as 3-D dynamic rotation, real-time animation, unlimited model size, and menu-driven enhanced modeling. FEMB interfaces with all major analysis software including NASTRAN®, Dyna 3D, CAL3D, and Moldflow. FEMB's CAD system interfaces allow users to access data from any CAD system.

IRIX version compatibility: 5.x, 6.x

FLUENT™ + FLUENT/UNS

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Centerra Resource Park
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http://www.fluent.com/

FLUENT™ + FLUENT/UNS are ideally suited for incompressible and mildly compressible flows. Utilizing a pressure-based segregated method solver, FLUENT contains physical models for a wide range of applications including turbulent flows, heat transfer, reacting flows, chemical mixing, combustion, and multiphase flows. FLUENT/UNS provides many of FLUENT's physical models on unstrutured meshes, bringing you the benefits of easier problem setup and greater accuracy using solution-adaption of the mesh.

IRIX version compatibility: 5.3, 6.1, 6.2, 6.x

FiberSim® Composite Engineering Environment

Sales Department
Composite Design
Technologies, Inc.
235 Wyman Street
Suite 110
Waltham, MA 02154
USA
617-290-0506
617-290-0507 (fax)
info@cdt.com

FiberSim® Flat Pattern, FiberSim® Laser Projection, FiberSim® Export: Composite Technologies is the world's leader in software for the design and manufacture of advanced composites. The FiberSim suite of software tools are tightly integrated with the leading CAD systems such as, CATIA, UniGraphics, and Pro/ENGINEER. The modules address many unique challenges of composites, including: Flat Patterns, Laser Projection, Automatic documentation generation, and the COmposite Engineering Environment, for feature based ply management and na integrated design tool.

IRIX version compatibility: 6.2, 6.3

Mechanical CAD/Mechanical CAM

FlashBack

Frank Delli Colli
Marketing Comm Manager
ICAM Technologies
Corporation
1900 Sources Boulevard
Pointe-Claire, PQ H9R 4Z3
Canada
514-697-8033
514-697-8621 (fax)

Flashback can use the point data obtained from Coordinate Measuring Machines (CMM), 3D laser scanners or other acquisition equipment to identify geometric entities.

Flashback can generate surfaces automatically as well as interactively. The identification and extraction of geometric surface automatically as well as interactively. The identification and extraction of geometric surface entities are accomplished by the use of three modules:

- SEGMENTATION
- EXTRACTION
- FITTING

The Segmentation is used for the automatic recognition of geometric entities from Range Image of the scanned part at the desired resolution.

The Extraction module is used to perform semiautomatic identification of user defined surface types from a cloud of points or a Range Image.

The Fitting module is used to fit surfaces to points which are known to lie on the surface.

The other two modules, REGISTRATION and GRIDDING, are 3D point data manipulation tools. The Registration module is used to find the transformation matrix between 2 sets of 3D data points corresponding to different views of the part. The Gridding module organizes a non-ordered cloud data points in the form of Range Image ordered data.

IRIX version compatibility: 5.3

Flowmaster

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Marketing Executive
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5QP
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Flowmaster is a unique interactive software package which simulates internal fluid flow. It enables engineers to model complete piping systems graphically in order to predict pressure and flow distribution. These results are used to optimize new designs and to improve the performance of existing installations. The software is appropriate for use in power generation, utilities, defense, shipbuiling, aerospace, automotive, and oil gas petrochemical industries.

Flowmaster is comprised of a suite of modules. At the heart is a graphical user interface which allows engineers to build schematic representations of pipe network interactively. The user then adds non-graphical data to the network via pull-down data forms.

IRIX version compatibility: pre-5.x, 5.3

ForEdit© 1.2

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ForEdit©/ForConvert allows editing, clean-up and other post-processing of CAD, drafting and other scanned-in images. ForEdit/ForConvert also allows markup, redlining, hardcopy output and conversion to CGM vector file format.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

GENOA

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fabdi@aol.com

GENOA utilizes the parallel computing power for structure and material processing. GENOA features a modular architecture making it fast, user friendly and highly versatile dedicated and high speed analysis of next generation composite material (polymer, ceramics, metal matrix). GENOA features include: 1. Parallel Processing, 2. Stochastic Simulation, 3. FEM, 4. Hierarchical Composite Mechanics Simulation, 5. Graphic User Interface, and 6. Damage Tracking.

IRIX version compatibility: 5.x

GIGVIZ™

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415-956-8212
415-956-8213 (fax)
**doNotSendCFgigsf@netco
m.com**
http://www.electrogig.com/

GIGVIZ™ is an affordable, high-end 3-D visualization solution for the rendering of industrial/product designs. Designed for use by engineers, architects, industrial designers and other CAD users, GIGVIZ provides a full complement of tools for the modeling and photo-realistic rendering of virtual prototypes. GIGVIZ's modeling tools include a constructive solid geometry modeler, spline free forms, and full support for boolean operations. CAD users may use GIGVIZ's modeling tools or they can use their own CAD systems (e.g. Pro/ENGINEER™) and transfer files back and forth with GIGVIZ. Attributes may be assigned interactively or selected from provided libraries.

IRIX version compatibility:

GIGVIZ™-Advanced

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**doNotSendCFgigsf@netco
m.com**
http://www.electrogig.com/

GIGVIZ™-Advanced was developed for advanced users wishing to create dynamic, full-motion representations of design concepts. The product offers all of the features of the baseline GIGVIZ package plus the following: a complete suite of animation tools including keyframing, time-curve editing, track editing and sequence editing; multi-processor support for Parametric Raytracer on Onyx-class machines; Render Manager for automatic network-distributed rendering; and one additional render-only license.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

GOELAN.C™

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President
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GOELAN.C™ is an interactive graphics CAM software for NC/CNC programming of milling machines, machining centers with up to 5 axis, lathes and turning centers, wire EDMs.

GOELAN.C is dedicated to the NC programming people of small and medium size companies such as jobshops, or of larger corporations manufacturing their own products, using NC equipment.

GOELAN.C connects with most CAD systems through standard or direct interfaces. Easy data manipulation and modification make it a very powerful tool for the workshop.

Curren versio of GEOLAN.C is 3.4. GOELAN.C runs on standard Indigo with 16Mb RAM, 1Gb disk and Irix 5.2.

IRIX version compatibility: 5.3, Pre 5.x

GeaFeaMeshConverter

Curtis Hoff
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313-998-0700
313-998-0711 (fax)
choff@hoff.com
http://www.hoff.com

HoffUtlities GeaFeaMeshConverter translates a Pro/Mechanica GEA model into the input format of many h-type finite elements products. These are also industry standards which can be utilized in countless other engineering tools. Your Pro/Mechcnica model can now be used as a master model to enhance the use of other products. HoffUtilities GeaFeaMeshConverter eliminates 99% of the cost and calendar time associated with developing redundant p- and h-element models. GeaFeaMeshConverter Version 17 supports all Pro/Mechanica element types and translates the node locations, elements and element connectivity automatically.

IRIX version compatibility: 5.3, 6.1, 6.2

Geometric (Wireframe & Surface) Modeling

Eyal Dolev
Vice President, Marketing
Cimatron Ltd.
11, Gush-Ezion Street
Givat Shmuel, 51905
Israel
972-3-531-2121
972-3-531-2140 (fax)
http://www.cimatron.com/

Cimatron Wireframe and Surface modeling tools are based on advanced algorithms that generate and control all mathematical entities. A full range of geometric elements are available, including Bezier, Gregory, and especially NURBS surfaces. Designers command a comprehensive, powerful, and flexible toolset. Capabilities include sophisticated blending and filleting, extensions, multi-surface trimming, and the ability to create composites from multiple surfaces. A wide range of modification and verification tools enable fast changes and assure absolute accuracy.

IRIX version compatibility:

HMS-APT©

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Chairman
Houtzeel Manufacturing
Systems, Inc.
233 Aspen Circle
Lincoln, MA 01773-4921
USA
617-890-2811
617-259-1253 (fax)

HMS-APT© is a one path numerical control programming system. It is the only system which conforms to the new ANSI/ISO APT standards. It includes 3-D, 5-axis, lathe, and sculptured surfaces programming. Extensive APT documentation is included. This documentation is used by many educational institutions.

The HMS-APT system contains an APT/AC to HMS-APT filter which converts non-standard APT/AC programs to HMS-APT and enables companies using non-standard ANSI APT (such as APT/AC, etc.) to use HMS-APT.

IRIX version compatibility: 5.3, Pre 5.x

Mechanical CAD/Mechanical CAM

HMS-CAPP®

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The HMS-CAPP® product is a fully functional process planning system that can be used for all types of process planning including machined parts, assembly, electrical, fabrication, and quality assurance applications.

HMS-CAPP runs in a client/server, UNIX based environment, and requires a relational database management system such as ORACLE, INGRESS, SYBASE, INFORMIX, or EMPRESS.

The system combines text, graphics, photographs, and videos. It supports both variant and group technology based generative process planning.

IRIX version compatibility: 5.3, Pre 5.x

High Resolution CSG, Complex Surface, and Facet Modelling and Training

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410-273-6350 (fax)
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http://www.geosol.com

GSI creates and troubleshoots high resolution Combinatorial Solid Geometry (CSG), complex surface (IGES 114/128), facet format databases using the BRL-CAD (US Army Ballistic Research Laboratory Computer Aided Design) editor.

Using our advanced scanning system, mobile modeling facility, and powerful six part process, we have constructed over 200 military target descriptions for numerous applications, including: vulnerability, signatures, and engineering studies.

GSI offers comprehensive training courses incorporating an effective personalized / realistic approach for structuring, measuring, formulating, command-entry, validating, and documenting geometric databases using BRL-CAD and ACAD.

IRIX version compatibility:

I-DEAS for Design

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513-576-2135 (fax)
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http://www.sdrc.com/

I-DEAS for design products provide the world's leading tool for solids-based design of mechanical parts and products. The foundation for all of I-DEAS is the I-DEAS Master Modeler™, a variational design system that offers users a wide variety of capabilities for real-time, integrated variational sketching directly on a solid model. The Dynamic Navigator™ locates significant geometry location, and a context-sensitive predictive cursor highlights design relationships. A shape-then-size capability enables design engineers to capture their ideas immediately and specify dimensions, constraints and other design information later. As a result, users are able to pursue innovative design concepts quickly and share them with other members of the development team.

IRIX version compatibility:

I-DEAS for Manufacturing

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I-DEAS Generative Machining™ software provides unprecedented tools for capturing the manufacturing planning, tooling, and NC programming tasks in a single, unified system. Using electronically-stored knowledge (or rules), as well as the experiences of your NC programmers and machinists, I-DEAS intelligently generates tools motion and machine instructions. Because it encompasses the complete machining environment, it generates tool paths that avoid gouging the parts or colliding with clamps or fixtures, maintains tolerances, optimizes motion, and minimizes tool wear. Continuously evolving stock models facilities communication and verification by depicting that state of the stock after each machining operation. Embedded system knowledge seamlessly updates NC programs to account for design changes.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

I-DEAS™ Manufacturing Applications

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I-DEAS™ Manufacturing Applications: I-DEAS Generative Machining™, I-DEAS GNC™, I-DEAS GNC Multi-Axis™, I-DEAS Wire EDM™, I-DEAS G-Post™, I-DEAS Post Writer™.

IRIX version compatibility:

I-DEAS™ Simulation Applications

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I-DEAS™ Simulation Applications: I-DEAS Finite Element Modeling™, I-DEAS Extended Finites Element Modeling™, I-DEAS Simulation Advisor™, I-DEAS Beam Modeling™, I-DEAS Laminate Composites™, I-DEAS Model Solution Linear™, I-DEAS Model Solution Nonlinear™, I-DEAS Optimization™, I-DEAS Systems Dynamics Analysis™, I-DEAS Model Response™, I-DEAS TMG™, (Thermal Modeling), I-DEAS Material Data System™, I-DEAS Material Data Catalog-MDLA™. Information Index, Inc., I-DEAS Material Catalog-Plastics™.

IRIX version compatibility:

I-DEAS™ for Simulation

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I-DEAS for simulation products are the world's leading capabilities for mechanical product simulation. I-DEAS Master Series™ analysis packages provide engineers and analysts with all the software tools they need for every analysis application by allowing users to simulate product performance early in the design process, reducing the number of prototype build-and-test required, and allowing companies to get their designs right the first time. Typical mechanical product performance parameters, such as deflection, stress/strain, temperature, vibration/dynamic response, and flow can be predicted. I-DEAS Optimization™ software provides direct guidance on how designs can be improved.

IRIX version compatibility:

I/BURN (Intergraph/Thermal Cutting Option)

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Intergraph Corporation
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Huntsville, AL 35894-0001
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205-730-3701
205-730-3453 (fax)
****
**http://www.intergraph.
com**

I/BURN is an application enhancement package to the I/NC system. This optional package provides capabilities for two-axis flame, plasma, and laser cutting machines. It is also used for waterjet, wood routers, and other 2-axis profiling machines.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

I/DESIGN

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com**

Intergraph's Industrial Design System is a software package for creative design of products, packaging, and displays. Combining modeling, visualization, and prototyping capabilities, I/Design supports true computer-aided industrial design in a complete, accurate, flexible system, fully integrated with engineering functions. I/Design is well suited to corporate design offices and independent design consultancies and can be used to design a variety of products, including consumer goods, jewelry, vehicles, yachts, packaging, buildings, and interiors.

IRIX version compatibility:

I/DESIGN Protege

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I/Design Protege is a software package for computer-aided industrial design (CAID). The software provides free form modeling and rendering tools for creative product design and visualization. Product models created with I/Design Protege are accurate and complete and can be used directly in engineering and manufacturing applications.

I/Design Protege is a compact version of I/Design, Intergraph's high-performance solution for industrial design. Providing the modeling and rendering power of I/Design in an inexpensive package, I/Design Protege is a cost-effective tool for introducing CAID or for expanding systems capabilities.

IRIX version compatibility:

I/DXF

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Intergraph's DXF translates EMS (Engineering Modeling System) design files to and from the standard AutoCAD DXF file format. DXF is a neutral exchange format for use with interfacing to AutoCAD graphics systems.

IRIX version compatibility:

I/MAXMILL (Intergraph/Multi-Axis Milling Option)

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**http://www.intergraph.
com**

I/MAXMILL is an application enhancement package to the basic off-line programming system, I/NC. This optional package provides capabilities for automatically creating 2-1/2 through 5-axis toolpaths (including swarf cutting) from geometry created using the EMS family of design products. This module includes the capabilities of Pocket, Profile, Face, and Point-to-Point. I/MAXMILL provides for area clearing by following the surface boundary, a user-defined vector, or flow-lines of the surface. Multiple surfaces may be defined, as well as roughing and finishing modes. Multiple depths of cut, multiple side cuts, island and clamp avoidance, and check surface control to a specified tool height are supported.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

I/MDS (Intergraph/Mechanical Drawing System)

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com**

I/MDS is a system for creating 2-D mechanical drawings or for creating detail drawings based on EMS surface and solid model files. It provides a full complement of drafting and detailing functions to allow a draftsperson to rapidly create production drawings. Features include: full wireframe geometry creation and manipulation, including B-splines; support of all major drafting standards (ANSI, ISO, DIN, BSI, JIS); weld and surface finish symbols; geometric tolerancing; viewing of EMS surface and solids models; creation of bidirectionally associative detail drawings of EMS FILES; parametric programming language (PPL); and MicroStation/IGDS conversion.

IRIX version compatibility:

I/MILL (Intergraph/2 1/2 Axis Milling Option

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com**

I/MILL is an application enhancement package to the basic offline programming system I/NC. This optional package provides capabilities for automatically creating 2.5 axis tool paths from geometry created using the EMS family of design products. I/MILL is comprised of three modules:

- Profile: for machining parallel to a simple or composite curve
- Facing and Pocketing: for area clearing by following either a boundary or a vector
- Point-to-Point: for providing automatic collection of holes, optimized sorting of holes for shortest distance, standard machine cycles, and user-defined machine cycles

All modules support island and clamp avoidance, multiple depths of cut, multiple side cuts, and finished depth control.

IRIX version compatibility:

I/NC (Intergraph/Numerical Control)

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**http://www.intergraph.
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I/NC is a graphics-based off-line programming system for programming numerically controlled equipment. It complements the Intergraph EMS family of design products by using existing geometry to generate and maintain NC programs. I/NC is user-programmable, allowing the user to automate the programming environment with either PPL or macros. I/NC is supplemented by optional software packages for addressing specific manufacturing processes. As a basic package, I/NC features user-programmability, user-definable machine and tool libraries, graphic program verification, graphic and non-graphic editing of program and tool path data, and a very powerful user-definable machine output, which eliminates the need for an additional post-processor generator.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

I/PDU (Intergraph/Product Data User)

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MS GD 3000
Huntsville, AL 35894-0001
USA
205-730-3701
205-730-3453 (fax)
****
**http://www.intergraph.
com**

Intergraph's Product Data User (I/PDU) software provides a graphical user interface to the engineering data management capabilities of the Product Data Manager (I/PDM). Installed on client workstations running Intergraph's mechanical design, engineering, and manufacturing software, I/PDU enables application users to retrieve data from any storage location on the network.

I/PDU operates in an interactive mode directly from the application environment, providing convenient icon menus and forms for searching and selecting data and preforming system administration tasks. I/PDU provides streamline access to a network-wide database and data management system.

IRIX version compatibility:

I/TURN (Intergaph/Lath Option)

Kim Corbridge
Product Mktg Manager
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****
**http://www.intergraph.
com**

I/TURN is an application enhancement package to the off-line programming system, I/NC. This optional package provides capabilities for lathe programming and consists of three automatic modules:

- Turning: for turning by following a vector or part profile; roughing and finishing modes may be defined, as well as multiple depths of cut and undercutting based on tool description
- Grooving: for rough and finish grooving; the module also supports multiple cuts and undercutting based on tool description
- Threading: for standard, tapered, and Acme threads; the thread module also supports multiple, spring, and gage passes.

IRIX version compatibility:

I/VDAFS

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****
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com**

Integraph's VDAFS translator translates EMS (Engineering Modeling System) design files to and from the neutral data format of the Verband der Automobilindustrie (VDA). VDA is an international data exchange standard for the automotive industry.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

I/WIRE (Intergraph/Wire EDM Option)

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****
**http://www.intergraph.
com**

I/WIRE is an application enhanced package to the I/NC system. This optional package provides capabilities for 2-4 axis wire EDM cutting machines, and includes the following features:

- Perimeter Clearing Automatic wire cutting and threading supported
- Constant conic angles supported 4-axis wire EDM machines supported

IRIX version compatibility:

ICEM PART

Tom van 't Erve
Acting General Manager
Tecnomatix-C3
Institutenweg 24
PO Box 3943
Enschede, 7500 DX
Netherlands
011-31-53-309713
011-31-53-309722 (fax)
**c3quest@utwbptu2.wb.
utwente.ul**

The discrete manufacturing industry is facing increasing demands for shorter turnaround times and higher quality production. For those companies that are faced with large numbers of small jobs, the estimating and process planning functions are critical.

Version 1.2 of the "PART" software works directly from B-rep solid models produced by many popular design systems including ACIS-based applications, CATIA, ICEM, Pro/ENGINEER and those with STEP interfaces. Through automatic feature recognition, these models are broken down into manufacturing features. The system can automatically recommend setups, select cutting tools and machines, optimize machining operations, and produce complete NC tool paths and reports. Process planning efforts are drastically reduced and quality is improved through consistent application of standard practices.

IRIX version compatibility: 5.3, Pre 5.x

IGES TOOLKIT

Charlene Hess
Dir., Sales & Marketing
IDA, Inc.
1127 South Mannheim Road
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Westchester, IL 60154
USA
708-344-1815
708-344-2840 (fax)
hess@ida.com
http://www.idacorp.com

The IGES Toolkit is composed of three intuitive and easy-to-use products that together offer a complete solution for high-level IGES engineering applications. The first product, IGESVIEW, is a graphics viewer for the display and manipulation of IGES files in their graphical form. The IGES Parser/Verifier is a detailed analysis utility for checking conformance of an IGES file to the IGES specification and to the CALS subsets. IGESXpert is a powerful IGES file browser an editor for the examination, modification and repair of IGES files. These products are available for UNIX workstations; IGESVIEW and IGES Parser/Verifier are available in PC version as well.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

IGRIP®

Marketing Department
Deneb Robotics, Inc.
3285 Lapeer Road West
PO Box 214687
Auburn Hills, MI 48321-
4687
USA
810-377-6900
810-377-8125 (fax)
marketing@deneb.com
http://www.deneb.com/

IGRIP® is an interactive, 3-D, graphic simulation tool for designing, evaluating, and off-line programming robotic workcells. Actual robotic/device geometry, motion attributes, kinematics, dynamics, and I/O logics are incorporated to produce extremely accurate simulations. IGRIP optimizes critical factors such as robot motion planning, cycle time prediction, collision detection, calibration, and multiple I/O communication. Other applications include off-line programming, industrial applications (painting, debur, welding), research and development, articulated assembly design, flexible manufacturing system simulation, nuclear/hazardous duty automation, and general-purpose simulation. Data can be imported/exported through bidirectional translators.

IRIX version compatibility:

IMPLANT-I©

Steven Talbott
Marketing Communications
CADCentre, Ltd.
High Cross
Madingley Road
Cambridge, CB3 0HB
UK
44-1223-556655
http://www.cadcentre.co.
uk

IMPLANT-I© enables designs in Microstation DGN format to be automatically imported directly into CADCentre's powerful PDMS or REVIEW packages.

IRIX version compatibility: 5.2, 5.3, 6.2

ISOSPOOL©

Steven Talbott
Marketing Communications
CADCentre, Ltd.
High Cross
Madingley Road
Cambridge, CB3 0HB
UK
44-1223-556655
http://www.cadcentre.co.
uk

ISOSPOOL© is a product for piping fabricators allowing them to automate the production of spool isometrics and material lists. ISOSPOOL can accept CAD data from a wide range of plant design software to interactively generate new spool drawings. Annotation of drawings is possible through ISOSPOOL's direct link to AutoCAD. Version 10.3.1 IRIX 4. 0.5c or later

IRIX version compatibility: 5.2, 5.3, 6.2

Mechanical CAD/Mechanical CAM

Imagenation

Carola Reichert
Marketing Coordinator
Spicer Corporation
221 McIntyre Drive
Kitchner, ON N2R 1G1
Canada
519-748-2462
marketing@spicer.com
http://www.spicer.com

Imagenation provides powerful scan, view, redline/markup, edit and print/plot capabilities for virtually any electronic document.

Featuring fast, accurate viewing, Imagenation supports industry-standard vector, raster, text and hybrid file formats--including sophisticated multi-page, multi-format documents.

Imagenation is database-independent with an extensive Application Programming Interface (API)--offering unparalleled control and customiztion. From desktop to enterprise, Imagenation delivers imaging throughout an organization.

With more than one thousand clients and tens of thousands of users worldwide, Imagenation is the trusted choice of informed imaging solution providers.

Available for Windows 3.X, Windows NT, Windows 95, HP-UX, SunOS, Sun Solaris, Digital UNIX, IBM AIX, SGI IRIX and Macintosh.

IRIX version compatibility: 5.x

Infinite Element Library for Acoustics

Les Wigdor
MTS
AT&T Bell Laboratories,
Advanced Tech. Systems
Room 15G-325
67 Whippany Road
Whippany, NJ 07981-0903
USA
201-386-7300
201-386-6616 (fax)
http://www.research.att.com/

FOR REVIEW ONLY! -- A library of infinite element technology, featuring the Burnette Infinite Element, for the finite element modeling of acoustic fields.

IRIX version compatibility:

Integrator

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Sales Manager
C-TAD Systems, Inc.
3025 Boardwalk
Ann Arbor, MI 48108
USA
313-665-3287
313-665-9736 (fax)
john@ctad.com

The Integrator is a unique translation package for converting CAD data among a variety of systems and standards. The Integrator is made up of various translation modules, including both direct interfaces and an IGES-to-IGES module to "flavor" IGES files for compliance into the target system.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

Jewel CAD

Edmond Li
Product Manager
Synergie Acclaim
Technologies
37/F, West Tower, Hennesy
Centre
500 Hennessy Road
Causeway Bay, HK
Hong Kong
(852) 2882-2970
(852) 2882-2952 (fax)
acclaim@synergie.com

Jewel CAD is a practical CAD/CAM solution in the design intensive and extremely competitive jewelry industry. The need to handle complex freeform geometries, speed and ease of operation and realistic visualizations has defeated most traditional and general purpose solutions. Jewel CAD is an extremely new and specialized system developed in the jewelry industry that combines very easy-to-use features which creative designers will enjoy using. The immediate visualization of an idea, the ability to interact with it and see the changes instantly will capture and enhance design ideas. Jewel CAD means fast prototyping, more economic designs, effective communication of design ideas, and efficient management of designs.

IRIX version compatibility:

KaTy™

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Marketing Director
5D Solutions, Ltd.
Southbank Technopark
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London, SE1 6LN
UK
44-171-922-8814
44-171-401-8621 (fax)
steve@five-d.com

KaTy™ is a technical illustration package that renders 3-D objects in a variety of conventional illustration styles from stippling to cross-hatching, all with variable "weight-of-line" and line highlights. All surface patterns follow form and inherent surface highlights, assisting the orientation of components by shape. Properly annotated, these features are ideal for the description of complex assembly and maintenance procedures. Using 3-D object databases, many different views of each object can be drawn quickly and accurately, and the drawings can be animated. KaTy's applications are in manuals, maintenance training, and media illustration, using low-cost printing methods.

IRIX version compatibility:

LINKAGE™

Thomas Craighead
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Itasca, IL 60143
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708-250-0090
708-250-8514 (fax)
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or info@cimlinc.com
http://www.cimlinc.com/
msg/

CIMLINC's family of LINKAGE™ solutions represent a unique approach to business process improvement. These solutions are "process-ware" - designed for the sole purpose of speeding and improving production and design processes without lengthy and expensive implementation of data conversion. Because these solutions speed and improve design and production both significantly and quickly, they offer demonstrable economic return - often in a matter of a few months. These standard, "off-the-shelf" solutions include LINKAGE Shop View, LINKAGE Shop Floor Workflow, LINKAGE TQM-9000, LINKAGE Process Planning, LINKAGE Concurrent Engineering, LINKAGE Engineering Change Management, and LINKAGE Non-Conformance Management.

LINKAGE solutions are built using CIMLINC's LINKAGE tools. LINKAGE is a 4GL application development package, providing high-productivity data integration, automating the creation, maintenance and distribution of manufacturing information. LINKAGE retrieves text, graphics and database information that is stored in networked, heterogeneous computing environments. LINKAGE maintains live data links creating real time product and process interaction. Application data can be accessed bi-directionally wherever they reside.

IRIX version compatibility: 5.3, Pre 5.x

Mechanical CAD/Mechanical CAM

LOOK-IN

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USA
313-665-3287
313-665-9736 (fax)
john@ctad.com

LOOK-IN permits 3-D CAD data to be shared in real time by multiple users in remote locations, even if those users are running different PC's or non-SGI workstations. The various parties are connected via an Ethernet LAN or across standard telephone lines.

IRIX version compatibility: 5.3

LOOK-IN+

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LOOK-IN+ permits 3-D CAD data to be shared in real time by multiple users in remote locations, even if those users are running different PC's or non-SGI workstations. The various parties are connected via an Ethernet LAN or across standard telephone lines.

IRIX version compatibility:

MAGICS©

Johan Pauwels
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Materialise N.V.
Kapeldreef 60
Leuven, B 3001
Belgium
011-32-16-270-368
011-32-16-270-319 (fax)
http://www.materialise.be

MAGICS© allows automatic generation and control of support structures for stereolithographic models. The software facilitates the use of rapid prototyping machines.

IRIX version compatibility: 5.3, Pre 5.x

MAGMASOFT

Jorg C. Sturm
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Giessereitechnologie Gmbh
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jcs@magma.ac-euregio.de

Developed for foundrymen by foundrymen, MAGMASOFT is a comprehensive tool for an economical and sound casting process. Simulation of mould filing, solidification, mechanical properties and residual stresses supplies the necessary information for the optimization of the casting process prior to any tool or pattern making. Fully menu driven with its own Solid Modeller and various CAD interfaces for geometry input, MAGMASOFT is a turn-key solution. MAGMASOFT helps to avoid gating and feeding problems, predict casting quality, aids permanent mould design and reduces fetting costs.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

MAGMAdisa

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Magma
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Germany
49-241-88901-0
49-241-88901-60 (fax)
jcs@magma.ac-euregio.de

MAGMAdisa allows modeling and optimization of process conditions for vertically jointed Dismatic moulds.

IRIX version compatibility:

MAGMAiron

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Germany
49-241-88901-0
49-241-88901-60 (fax)
jcs@magma.ac-euregio.de

The MAGAMSOFT add-on cast iron module MAGMAiron predicts casting structures and properties.

IRIX version compatibility:

MAGMAlpdc and MAGMAhdpc

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49-241-88901-60 (fax)
jcs@magma.ac-euregio.de

The low-pressure and high pressure die casting modules, MAGMAlpdc and MAGMAh-pdc, allow process simulation and in-situ control for permanent mould applications.

IRIX version compatibility:

MAGMAsteel

Jorg C. Sturm
Magma
Giessereitechnologie Gmbh
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Germany
49-241-88901-0
49-241-88901-60 (fax)
jcs@magma.ac-euregio.de

MAGMAsteel allows the prediction of macro-segregation patterns, helps to evaluate the optimal feeding system and ensures adequate heat treatment.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

MAGMAstress

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Magma
Giessereitechnologie Gmbh
Kackerstr. 11
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Germany
49-241-88901-0
49-241-88901-60 (fax)
jcs@magma.ac-euregio.de

MAGMAstress features the prediction of residual stresses and distortion of casting and die stresses.

IRIX version compatibility:

MATRA DATAVISION's PROFESSIONAL SOLUTIONS

Eric David
Product Manager
Matra Datavision
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Parc d'Activities de
Courtaboeuf
Les Ulis, 91954
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33-1-69-82-27-05
33-1-69-82-26-28 (fax)
e-david@paris1.matra-dtv.fr
http://www.matra-datavision.fr/

Complementing the STRIM applications, MATRA Datavision provides other Professional Solution software tools for specific trade applications that can be used in any CAD environment. Each solution supports industry-standard interfaces, allowing effective communication with outside CAD systems:

- FOLDMASTER accelerates the design and manufacture of sheet metal parts produced by cutting, bending and twisting
- SURFMASTER is particularly adapted to the machining of products and tools containing complex surfaces
- MEGAVISION lets the user visualize space allocation and spatial interference in complex assemblies in real time
- NCSIMUL is an advanced NC simulation and verification package
- OPTRIS aids in the design of press tools for sheet metal stamping
- PERCEVAL+ inspects CAD surfaces, free-form shapes, and mass-produced parts in real-time for total quality control

IRIX version compatibility:

MAX-5™

Alan R. Levine
CAM Software Product
Manager
Northern Research &
Engineering Corporation
39 Olympia Avenue
Woburn, MA 01801-2073
USA
617-937-4643
617-935-9052 (fax)

MAX-5™ is a specialized software system that provides five-axis NC machining instructions for the flank milling of turbomachinery impellers, blisks, and blades. This system is the answer when general-purpose CAM proves too diffcult to apply. There are built-in features for the selection of cutter size, depth of cut, precision, finish, optimized cutter paths, and patented collision avoidance. A graphics postprocessor allows previewing of cutter paths with a shaded-surface representaion that includes both five-axis milling machine and the component to be milled.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

MAX-AB™

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CAM Software Product
Manager
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Engineering Corporation
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MAX-AB™ is a specialized software system that provides five-axis NC machining instuctions for the point milling of turbomachinery impellers, blisks, and blades. This system is the answer when general-purpose CAM proves too difficult to apply. There are built-in features for the selection of cutter size, depth of cut, precision, finish, optimized cutter paths, and patented collision avoidance. A graphics postprocessor allows previewing of cutter paths with a shaded-surface representaion that includes both five-axis milling machines and the component to be milled.

IRIX version compatibility:

MEGAVISION

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http://www.matra-datavision.fr/

MEGAVISION is MATRA Datavision's special product for the visualization of space allocation and spatial interference in complex assemblies. Controlled by dial box buttons, this easy-to-use tool provides a dynamic scanning plane for visually sweeping the entire assembly or a particular subassembly. The user simultaneously follows both the complete, three dimentional screen view of an object and a dymanic, two-dimentional scan of a particular section. Mounting and dismounting of parts can be followed along a specific path to detect potential collision areas. Each component of the assembly is moved step-by-step and its position is recorded. The scene is then replayed with the active scanning plane to check for interference. With MEGAVISION, the designer can interactively validate even the largest, most complex assemblies in real-time.

IRIX version compatibility:

MEMCAD

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Microcosm Technologies
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919-677-9209 (fax)
davec@memcad.com
http://www.memcad.com

MEMCAD is an integrated design environment used in designing semiconductor based, MicroElectroMechanicalSystems (MEMS) devices and systems. MEMCAD addresses a host of MEMS design issues including physical device modeling, manufacturing analysis and high level system simulation. It permits IC device construction from layout files and foundry process parametrs with full 3D visualization and animation, including fly-by viewing. MEMCAD also supports domain coupled, thermo-electromechanical simulation and analysis. A designer can explore detailed design spaces with a variety of utility functions, including boundary condition sensitivities and device performance characteristics. High level system simulation links to SPICE or Sabre simulators are also available.

IRIX version compatibility: 6.x

Mechanical CAD/Mechanical CAM

MICRO CADAM® ACCESS

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com**
**http://www.microcadam.
com**

ACCESS is the basis of the MICRO CADAM® commitment to Open Architecture. ACCESS is a comprehensive developers' tool kit that can be used by end user programmers, system managers and administrators, CAD support groups, third party software vendors, and others. The general purposes to which ACCESS can be applied include: the extension and customization of existing applications, the interfacing to other systems and other data bases, the development of entirely new applications. ACCESS enables programmers to develop both batch and interactive applications in either C or FORTRAN.

IRIX version compatibility:

MICRO CADAM® Data Exchange

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213-613-2350 (fax)
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com**
**http://www.microcadam.
com**

MICRO CADAM® Data Exchange - Data Exchange provides bi-directional translation between MICRO CADAM and CATIA®. (Computer Aided Three Dimensional Interactive Application) developed by Dassault. MICRO CADAM offers CATIA customers as well as their subcontractors, vendors, and internal job functions not requiring dedicated CATIA operators, a complementary product line running on personal computers and a variety of UNIX workstations where CATIA is unavailable. Utility programs on CATIA support the creation of projected views from three dimensional models which can be transferred to MICRO CADAM for the creation of fully annotated engineering drawings, which is the strength of MICRO CADAM. Data Excahnge is an optional module which uses the third party programming interfaces of the respective packages, namely ACCESS and GII.

IRIX version compatibility:

MICRO CADAM® Data Transfer

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**bleitner@microcadam.
com**
**http://www.microcadam.
com**

Data Transfer provides bi-directional transfer and translation of models between MICRO CADAM and both host CADAM® and PROFESSIONAL CADAM®. Data Transfer operates in both an interactive mode and a batch mode for volume transfer. Using interactive Call File the operator can transparently access a model on a remote mainframe with the same ease and performance as being logged on the mainframe.

In batch mode any collection of groups, users, and models can be transferred. These collections or queues can be saved, deleted, and concatenated. Members can be added and removed from a queue. Elements are selected by wild card matching or by interactive selection from scrollable lists or tree diagrams.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

MICRO CADAM® LDX

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213-613-2350 (fax)
bleitner@microcadam.
com
http://www.microcadam.
com

LDX is a powerful, flexible, open ended tool that enables customers to add layers of intelligence to their drawings and models. LDX not only supports the creation and management of this intelligence in the form of attributes and relationships but also allows CAD operators and other users to effectively, easily, and interactively naviatgate through these layers. At each point the operator can view, interrogate, plot and with appropriate permissions edit the model. The LDX environment operates similarly to hypertext and hypergraphic systems. LDX enables customers to readily create applications in the areas of component library management, parts retrieval systems, Bill of Material generation, schematics, and wiring diagrams.

IRIX version compatibility:

MICRO CADAM® Plus

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com

MICRO CADAM ® PLUS offers high-function desktop CAD capabilities ideal for demanding designers and engineers. MICRO CADAM has been used successfully in the aerospace, automotive, electromechanical, and consumer product industries on a world wide basis for over a decade. MICRO CADAM is a popular alternative for firms downsizing from mainframe CADAM®

MICRO CADAM Plus provides a powerful geometry engine for the creation and editing of graphic entities. Using the familiar techniques of descriptive geometry MICRO CADAM plus enables designers and draftspersons to create fully annotated engineering drawings in conformance with national, international, and corporate standards Bi-directional translators for DXF and DWG are included. Raster editing, compression, and input/output in all industry popular image formats are also provided.

IRIX version compatibility:

Manufacturing Software Integrating Motion w/Process Control

Al Harlow
President
Advanced Robotic
Technologies, Inc.
91 North Main Street
Chagrin Falls, OH 44022
USA
216-247-9209
216-247-9210 (fax)
00000

ARTomation™: The first completely flexible off-line motion and process control solution available for automating paint finishing and coatings today. Patented, this uniquely integrated hardware and software package provides manufacturers with the ability to easily emulate (not "simulate") the process of paint finishing and coating their products. With an easy-to-use interface, any non-technical person can program any ARTomated painting process on the factory floor. The geometry of object(s) to be painted is imported, then just specify where and how much paint is to be applied. Through computer modeling and system feedback, the desired results are consistantly achieved on the paint line.

IRIX version compatibility: 5.3, Pre 5.x

Mechanical CAD/Mechanical CAM

Manufacturing for MICRO CADAM®

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213-613-2350 (fax)
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com
http://www.microcadam.
com

A series of CAM modules fully intergrated with other MICRO CADAM applications and built upon MICRO CADAM ACCESS tool kit. The modules included:

Mill- 5 axis capable milling, drilling and pocketing including automatic boundary search, path optimization and cutter path verification.

Lathe - roughing, finishing, grooving, threading, and drilling

Lathe Verification - displays up to six turrets simultaneously; simulates turret rotation

Nesting - interactive or automatic; rectangular or true shape; automated punch selection; optimized NC path

Sheet Metal - supports punching, lasers, flame cutting, and plasma

Tool Planning & Assembly - parametrically builds and accurately displays tooling to help detect collisions; provides complete bill of material.

IRIX version compatibility:

MetalCore™

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Canada
514-344-2252
514-344-1866 (fax)
metalcore@amra.com
http://www.amra.com

MetalCore™ is a powerful 3D virtual manufacturing environment that can simulate any sequence of casting metal forming and heat treating. It can predict defects, residual stresses and mechanical properties as they evolve during the manufacturing cycle. First release includes Foresight™ that enables MetalCore™ users to easily set up, perform, and analyse simulations of heat treating processes.

IRIX version compatibility: 5.3, 6.2

MicroStation Modeler™

Sales Department
Bentley Systems, Inc.
690 Pennsylvania Drive
Exton, PA 19341-1136
USA
800-778-4274
610-458-1060 (fax)
family@bentley.com
http://www.bentley.com/

MicroStation Modeler™ is a full parametric, feature-based, solid modeling CAD product. Modeler implementshybrid solid modeling by combining Constructive Solid Geometry (CSG) and advanced modeling techniques by combining explicity, parametric and variational geometry definitions. MicroStation Modeler is integrated into the MicroStation environment, so it includes all of the drafting surface modeling database interface and visulaization funcitonality that has made MicroStation the technology leader in the CAD industry. MicroStation Modeler is based on the ACIS geometric modeling kernel from Spatial Technology Inc.,

MicroStation Modeler will run on the following platforms: SPARCstation systems running Solaris 1 or Solaris 2;Hewlett-Packard Series 700 workstations running HP-UX; Silicon Graphics Indigo family of workstations running UNIX; IBM RS/6000 running AIX.

IRIX version compatibility: 5.2, 5.3

Mechanical CAD/Mechanical CAM

NC

Eyal Dolev
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11, Gush-Ezion Street
Givat Shmuel, 51905
Israel
972-3-531-2121
972-3-531-2140 (fax)
http://www.cimatron.com/

Cimatron NC operates directly on your Cimatron design models, or on data read in from IGES, DXF, VDA, or Pro/E files, to generate, edit, and verify toolpaths. The application supports milling from 2.5- to 5-axis work, as well as drilling, turning, punching, and wire EDM operations. Multiple surface milling is supported with automatic gouge-checking, automatic roughing fo complex geometries, and automatic pocketing. Toolpaths may be easily edited and updated, and changed geometries and toolpaths are automatically checked and flagged. Dedicated post processors and a post rocessor generator produce NC files for virtually any machine. A fast, photorealistic simulator lets you preview the precise toolpath.

IRIX version compatibility:

NCExpert

Dave Lichtenwalner
VP, Marketing
Optimation, Inc.
300 North Osage
Independence, MO 64050
USA
816-836-2000
816-836-8589 (fax)

NCExpert is a revolutionary software tool used to automatically create NC parts from unattributed CAD geometries, and is designed for contour cutters, routers, lasers, punch presses, and punch/contour machines. This process occurs with little or no user input required; however, interactive editing does allow modification of the NC result through graphical interaction if desired. A new user describes the process information through a set of data files that are used to define the process type, machine capabilities, tooling, and raw material characteristics. Output from NCExpert is a machine-specific NC part that contains NC codes that can be directed to the machine/control configuration specified at installation.

IRIX version compatibility: "5.3, Pre 5.x", 5.x, 6.x

NCL

Robert Conway
VP, Sales & Marketing
Numerical Control
Computer Sciences
2600 Michelson Drive
17th Floor
Irvine, CA 92612
USA
714-553-1077
714-553-1911 (fax)
conway@nccs.com

NCL is a powerful Computer-Aided Manufacturing software package which generates simultaneous 2 through 5-axis NC tool paths and provides parametric 3-D modeling. All geometric modeling and tool path functions are fully associative. A change to the model results in an immediate change to corresponding tool paths. NCL is ideally suited for environments where design changes are frequent, such as the aerospace industry. NCL also supports full parametric programming where a family of parts can be machined by simply filling in a form. NCL is used extensively in the aerospace, turbo-machinery, power generation, and composite industries.

IRIX version compatibility:

NCLIPV

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NCLIPV - In-Process-Verification interactively simulates, verifies, and displays the metal removal process of NC tool paths as they are being created. During and after the metal removal process, the cut model can be viewed from any orientation, cross sectioned, inspected, and compared to an existing solid model. NCLIPV is an extension to the NCL multi-axis machining software.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

NetFly™ Intranet/Internet Connection

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http://www.eai.com/

NetFly™ is an intranet connection that takes the advantages of VisFly and makes the process accessible to entire design teams. Using NetFly, engineers can interact with VisFly models across a corporate intranet and communicate about specific design issues, significantly enhancing the concurrent engineering process. NetFly enables non-VisFly users to participate directly in the design review process.

IRIX version compatibility: 5.3, 6.2

ODX/CAT

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299 Forest Avenue
Paramus, NJ 07652
USA
201-986-7860
201-986-7858 (fax)
info@cimsoftek.com
http://www.cimsoftek.com/

ODX/CAT is a platform independent, portable library of ANSI C language routines to read and wirte CATIA model and project related inforamtion found in CATIA models. This product is designed as a development toolkit for developers to create translators to and from CATIA on any supported platform.

IRIX version compatibility:

OPTICOMP©

Dave Lichtenwalner
VP, Marketing
Optimation, Inc.
300 North Osage
Independence, MO 64050
USA
816-836-2000
816-836-8589 (fax)

OPTICOMP© is an expert system for contour cutting of composite materials that creates production plans that are optimal for the requirements and conditions of the manufacturing environment. OPTICOMP considers material, labor, inventory, machine capability, and process art to produce the lowest cost production plan available. This expert system knows how to schedule all parts to attain the lowest cost and provide just-in-time production even when special expediting is required.

IRIX version compatibility: "5.3, Pre 5.x", 5.x, 6.x

OPTINEST©

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Optimation, Inc.
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816-836-2000
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An expert system for contour cutting, OPTINEST© creates production plans that are optimal for the requirements and conditions in the manufacturing environment. OPTINEST considers material, labor, inventory, machine capability, and process art to produce the lowest cost production plan available. The expert system OPTINEST knows how to schedule all parts to attain the lowest cost and provide just-in-time production even when special expediting is required.

IRIX version compatibility: "5.3, Pre 5.x", 5.x, 6.x

Mechanical CAD/Mechanical CAM

OPTIPUNCH©

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USA
816-836-2000
816-836-8589 (fax)

OPTIPUNCH© is an expert system for punch press applications. OPTIPUNCH considers material, tooling, labor, inventory, machine capability, and process art to produce the lowest cost production plan available. OPTIPUNCH is the integrated connection between the production schedule (MRP), the part design (CAD), and the shop floor. The intelligence of the expert system knows how to schedule all parts to attain the lowest cost and provide just-in-time production even when special expediting is required.

IRIX version compatibility: "5.3, Pre 5.x", 5.x, 6.x

OPTIROUT©

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816-836-2000
816-836-8589 (fax)

OPTIROUT© is an expert system for contour routing, stacking, drilling, riveting, and filling that creates production plans that are optimal for the requirements and conditions in the manufacturing environment. OPTIROUT considers material, labor, inventory, machine capability, and process art to produce the lowest cost production plan available. This expert system knows how to schedule all parts to attain the lowest cost and provide just-in-time production even when special expediting is required.

IRIX version compatibility: "5.3, Pre 5.x", 5.x, 6.x

PAM-STAMP™

Lionel Bouet-Willaumez
Int'l Mktg &
Communications
ESI Group
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Silic 303
Rungis CEDEX, 94588
France
33-1-49-78-28-00
33-1-46-87-72-02 (fax)
chaillou@cts.com

PAM-STAMP™ is the leading STAMP solution used by the automobile industry and their suppliers or subcontractors. as well as by large steel and aluminum manufactureres. Applications can also be found with household appliance manufacturers (e.g. pressure cookers, washing machines...) Note that the product also handles thermoforming and hydroforming as well as other metal forming applications.

IRIX version compatibility:

PERFIG™

Melvin Platt
Manager, CAE Group
Northern Research &
Engineering Corporation
39 Olympia Avenue
Woburn, MA 01801-2073
USA
617-937-4646
617-935-9052 (fax)

PERFIG™ is a specialized software system for preliminary design and performance prediction of single- and multistage centrifugal and mixed-flow pumps. It calculates design and off-design performance, and can be used to either optimize a new design or analyze an existing design. The geometry allows impellers, vaneless spaces, vaned diffusers, and scrolls, volutes, exit diffusers, or return channels.

A menu-type user interface requires input that includes mass flow, rotor speed, and component geometry. Graphic and tabular output are available for head, hydraulic efficiency, power required, and NPSH. Losses are identified according to 11 separate mechanisms.

IRIX version compatibility: 5.2, 5.3

Mechanical CAD/Mechanical CAM

PINS XL 2000

Peter Hartheimer
President
Generative N/C
Technology, Inc.
300 Knickerbocker Road
Cresskill, NJ 07626
USA
201-871-2350
201-871-2358 (fax)

Fully-featured PINS XL 2000 nesting system for Generative N/C Technology, Inc. (GEN/C) automatically generates material efficient nests and machine-optimized NC/CNC programs for routers, plasma and oxyfuel burners, punch and combination punch/thermal machinery, lasers, waterjets, composite cutters, sheet metal cells, and FMS. PINS XL 2000 combines direct integration to CAD and interfaces to factory floor and business systems to create a seamless, flexible, cost effective, and efficient manufacturing environment. Fully-automatic nesting supported by interactive capabilities and a UNIX or PC windows operating environment helps companies maximize material usage, utilize raw materials and remnant inventories more efficiently, increase machine tool throughput, and improve overall productivity and response time in the workstation-based, JIT and CIM-oriented factory.

IRIX version compatibility: 5.3

Pixsys Flashpoint™, model 5000

Martin Chader
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Image Guided Technologies
Inc.
5680 B Central Avenue
Boulder, CO 80301-2821
USA
303-447-0248
303-447-3905 (fax)

Pixsys Flashpoint™, Model 5000 is a 3-D digitizer, measuring position and orientation of objects in 3D space. FlashPoint consists of a hand-held touch probe, an optical sensor assembly, a proprietoary control module and various instruments and accessories. The sensor tracks miniature infared emitters attached to digitizing probes or other objects. THe control module interfaces to a host workstation or PC via its serial communications port, providing interactive 3D data capture in real-time.

FlashPoint's principle advantages--when compared with alternative measurement technologies are its accuracy, large volume, free-hand ease of use, portability and cost effectiveness. FlashPoint users are delighted with the true free-hand operation and large volume of FlashPoint, but the feature which sets FlashPoint apart from the other measurement devices is FlashTracker™. FlashTracker eliminates the need for elaborate fixturing; enables the user to manipulate the part being digitized during the digitizing sesson; and allows the sensors to be moved during the session.

IRIX version compatibility: 5.3

PostWorks

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USA
714-553-1077
714-553-1911 (fax)
conway@nccs.com

PostWorks - A universal 2 through 10 axis post-processor generator. PostWorks converts output from most major CAM systems into NC data files which can be used to run virtually any NC device including mills, lathes, EDMs, and CMMs. A simple Motif-style interface enables the user to easily establish machine configurations, control unit features, and output file formats. To verify your new post-processor, PostWorks automatically creates a solid model of the machine and dynamically simulates the machine's movement. PostWorks also provides a comprehensive macro language for easy customization. PostWorks is proven technology used across the manufacturing spectrum and is a cost-effective replacement to existing mainframe-based post-processors.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

PowerMILL

Tim Mitchell
Int'l Sales Director
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Talbot Way
Small Heath Business Park
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UK
44-121-766-5544
44-121-766-5511 (fax)
marketing@delcam.com
http://www.delcam.com

PowerMILL is a powerful, yet easy-to-use, 3-D CAM program for toolmakers that need to machine complex shapes. It generates toolpaths that optimize the productivity of CNC machine tools, while ensuring the highest quality machining of models and tooling. The range of options allows users to maximize cutting efficiency, minimize the time the tool spends in air, reduce hand finishing, and produce gauge-free parts. PowerMILL's exceptional speed of calculation means that different strategies may be compared rapidly.

IRIX version compatibility: 5.3, 6.0, 6.2, 6.3

Prelude DESIGN

Eric David
Product Manager
Matra Datavision
31, avenue de la Baltique
Parc d'Activities de
Courtaboeuf
Les Ulis, 91954
France
33-1-69-82-27-05
33-1-69-82-26-28 (fax)
e-david@paris1.matra-dtv.fr
http://www.matra-datavision.fr/

Created for the mechanical engineering environment, Prelude DESIGN is an affordable, easy-to-use software tool for designers and drafters who are ready to move beyond the limits of 2-D or 3-D wireframe-based CAD systems. Prelude DESIGN builds complex 3-D solid parts and multi-component assemblies with dimension-drive editing capabilities based on MATRA Datavsion's proven Adaptive Modeling technology, while advanced features smooth the path from initial design to associative drafting. Breathtaking photorealistic renderings provide the designer with true-to-life images of the final product. Three-dimensional solid parts created with Prelude DESIGN can be used as input to dedicated systems for analysis or manufacturing preparation.

IRIX version compatibility:

Pro/CDRS™

Rob Ferguson
Strategic Relationships
Parametric Technology
128 Technology Drive
Waltham, MA 02154
USA
617-398-5000
617-398-6000 (fax)
http://www.ptc.com/

Pro/CDRS™ is a conceptual design tool that allows industrial designers to easily create, evaluate, and modify product concepts while creating models that are complete, accurate, and that can flow directly into the CAD/CAM process. Pro/CDRS gives designers and engineers specific tools for the creation, modification, and evaluation of complex, 3-D, free-form curves and surfaces, and through Pro/PHOTORENDER™ allows the creation of photo-realistic images for model evaluation and presentation. Pro/CDRS is a stand-alone product with interfaces to a variety of mechanical design automation systems.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

Pro/ENGINEER®

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Parametric Technology
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617-398-5000
617-398-6000 (fax)
http://www.ptc.com/

Pro/ENGINEER® provides engineers with a revolutionary approach to mechanical design automation based on a unique, parametric, feature-based solid modeling technology. The product family consists of Pro/ENGINEER, the flagship product, and an array of application-specific products that address the complete spectrum of mechanical design-through-manufacturing processes.

The strength and uniqueness of the Pro/ENGINEER product family is two-fold. The parametric, feature-based capabilities provide engineers with unprecedented ease and flexibility. In addition, the unique data structure of Pro/ENGINEER provides full associativity among all engineering disciplines, tying together the entire design-through-manufacturing of a product. This enables companies to develop their products and manufactuing processes concurrently, and to easily evaluate multiple design alternatives, resulting in better designed products, produced faster and at a lower cost.

IRIX version compatibility:

Pro/JR.™

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617-398-5000
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http://www.ptc.com/

Pro/JR.™ is the entry-level version of the Pro/ENGINEER® product family for the price-sensitive customer who is migrating from a low-end 2-D product. Pro/JR. is a parametric, feature-based solid modeling system for the design-through-documentation of mechanical parts and assemblies. Pro/JR. functionality is ideal for designing both machined and common plastic parts and assemblies.

IRIX version compatibility:

Pro/PDM™

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Strategic Relationships
Parametric Technology
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617-398-5000
617-398-6000 (fax)
http://www.ptc.com/

Pro/PDM™ is a revolutionary product information management system designed for the concurrent engineering environment. Pro/PDM manages parallel access and modifications to product data, facilitates communication about a product as it evolves, and provides flexible and controlled data access to all members of a product development team. Pro/PDM extends traditional file management capabilities to fully support the associative and dynamic parametric designs created with Pro/ENGINEER. Product teams using Pro/PDM can work concurrently to bring new products to market more quickly than ever before.

Pro/PDM is an easy to use, window-based data management tool. It is a stand-alone application that may be run in conjunction with an ORACLE® database server and is available on over 30 supported workstation platforms.

IRIX version compatibility:

Product Evaluation Program

Brian Roemmele
Director, Sales/Marketing
Forming Technologies Inc.
6-1075 North Service Road
West
Oakville, ON L6H 2G2
Canada
905-827-2997
905-827-3166 (fax)
broemmele@forming.com

The Product Evaluation Program is an integrated set of tools for sheet metal stamping simulation. The method of forming can include crash forming, stretch forming, or deep drawing. The simulation results are displayed on a color-coded grid overlayed onto the geometry of the part, along with an interactive Forming Limit Diagram.

IRIX version compatibility: 5.3

Mechanical CAD/Mechanical CAM

Professional Visualizer

Maria Nordgren
Sales Manager
DeskArtes 3D Computing
Oy
Kalevankatu 3 A
Helsinki, 00100
Finland
358-0-644-335
358-0-644-330 (fax)
mno@@deskartes.fi

Professional visualizer produces photorealistic pictures of a model created in any CAD/CAM program. The pictures can be edited within the same program, then printed, plotted or transferred into a desktop publishing program.

Transfer a model from your CAD/CAM system. Paint and place graphics on your design. Immediately shade the textured image. Edit colors, materials, and light points in real time. Create photo realistic images of your model.

IRIX version compatibility: 5.3, 6.1, 6.2 Certified, 6.3 Certified, Pre 5.x

Professional Visualizer for Pro/ENGINEER

Maria Nordgren
Sales Manager
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358-0-644-335
358-0-644-330 (fax)
mno@@deskartes.fi

Professional visualizer for Pro/ENGINEER produces photorealistic pictures of a model created in Pro/E or in another CAD/CAM program. The pictures can be edited within the same program, then printed, plotted or transferred into a desktop publishing program.

Transfer a model from Pro/ENGINEER. Paint and place graphics on your design. Immediately shade the textured image. Edit colors, materials, and light points in real time. Create photo realistic images of your model.

IRIX version compatibility:

QUEST®

Marketing Department
Deneb Robotics, Inc.
3285 Lapeer Road West
PO Box 214687
Auburn Hills, MI 48321-4687
USA
810-377-6900
810-377-8125 (fax)
marketing@deneb.com
http://www.deneb.com/

QUEST® is an interactive, 3-D, graphic, discrete-event manufacturing process simulation system. Both discrete and continuous factory floor events can be simulated and integrated for realistic visualization, analysis, and management of complex manufacturing systems. Actual factory floor components can be linked to rich sets of predefined and/or user-defined logics to realistically model any manufacturing situation. Just-in-time inventory control, FMS, and push/pull production are supported in QUEST. Also, both push and pull manufacturing mechanisms can be integrated in the same model. QUEST is a unique tool for assessing productivity, cost-effectiveness, and efficiency of existing or proposed manufacturing systems before investing costly time and capital.

IRIX version compatibility:

REPLICA

Ron Stanford
United Scanning
Technologies, Inc.
#508-1755 West Broadway
Street
Vancouver, BC V6J 4S5
Canada
604-739-8202
604-739-9036 (fax)

3-D digitizing of faces, parts, objects and interface software to CAD/CAM systems. Image processing software capable of direct tool paths from digitized data to CNC tools.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

RIPS 2.2

Kari Johnson
Dir., Sales & Marketing
Altris
9339 Carroll Park Drive
San Diego, CA 92121
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619-546-7671 (fax)
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http://www.altris.com

Rapid Information Presentation Services (RIPS) is Altri's add-on product that enables high-speed, network-friendly distribution of document images managed by the Metaphase Product Data Mangement (PDM) system. Metaphase PDM software manages all aspects of a product's lifecycle. RIPS Version 2.2 image-enables the latest version of the metaphase PDM software to fully support both design and distribution processes, including document review, change and approval.

IRIX version compatibility: 5.3

ROBCAD VALISYS

Gary Brincat
ROBCAD Automotive Sales
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Inc.
39810 Grand River Avenue
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Novi, MI 48375
USA
810-471-6140
810-471-6147 (fax)
**http://www.tecnomatix.
com/**

ROBCAD is an interactive, user-friendly, comprehensive engineering tool for design, simulation, and off-line programming of flexible automation systems. With ROBCAD, users can model, modify, and quickly evaluate concepts for automating manufacturing processes. It accurately simulates and optimizes the operation of an automation system, ensuring maximum return on investment. ROBCAD provides off-line programming of an automation system by downloading programs to the robot controller, saving manufacturing downtime and eliminating collisions between system components.

ROBCAD features powerful mechanical and solid-modeling tools; accurate kinematic tools for modeling various mechanisms; interfaces to CAD databases; a powerful, generic, high-level simulation language; and drafting capabilities.

IRIX version compatibility:

ROBCAD/ARC

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ROBCAD/Arc is a dedicated product for the specific needs of arc-welding systems. The user uses the computer display to place welding points onto the objects to be welded, and the program automatically creates the welding seam. The user can specify the welding attributes (geometric and process parameters), iterate and optimize the welding process, and compare different welding alternatives, thereby improving productivity. Errors detected in implementation are avoided and equipment utilization is optimized. When the welding task is satisfactory, the user downloads the welding programs to the welding system.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

ROBCAD/CMM

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ROBCAD/CMM is a complete environment for planning inspection tasks and programming coordinate measuring machines (CMMs). CMMs are automated machines that inspect manufactured products to ensure compliance with design specifications. After the measurement tolerances are defined, ROBCAD/CMM accurately simulates the operation of the machine and the inspection probe, optimizes and verifies the inspection process and generates programs in multiple flavors of the DMIS language, which is becoming a standard CMM programming language. ROBCAD/CMM reduces machine shutdown time for programming, shortens programming time and minimizes the inspection task cycle time.

IRIX version compatibility:

ROBCAD/Fixtures

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com/

ROBCAD/Fixtures is a set of dedicated software tools for fixtures design in body assembly shops. ROBCAD/Fixtures integrates tightly with other ROBCAD CAPE (Computer-Aided Production Engineering) products for process design, such as: ROBCAD/Spot, ROBCAD/Gun and ROBCAD/OLP. Together these products provide a comprehensive mainstream solution for desigining spot-welding applications. From importing car parts, through unit sketching and sequencing, to detailing parts, ROBCAD/Fixtures supports the top down approach that is characteristic of mechanical conceptual design.

IRIX version compatibility:

ROBCAD/Martel

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com/

ROBCAD/Martel addresses the entire process of remote teleoperation. It provides tools and methodologies for applications ranging from simulation of manufacturing processes, to off-line programming of industrial and nonindustrial robots, to on-line monitoring of operations in hazardous environments. Camera and sensor simulation, automatic path-planning, real-time communication, and a friendly, interactive user interface guide the user from the initial creation of a complex environment all the way to on-line, parallel monitoring of external devices.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

ROBCAD/Paint

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**http://www.tecnomatix.
com/**

ROBCAD/Paint is a painting process planning tool and a programming environment for a painting robot. It allows visualization of the results of the actual painting process such as paint coverage and paint thickness on a car body. It enables automatic painting-path generation for robotic painting, and enables the user to verify the complete process without scrap car bodies and costly line shutdowns.

IRIX version compatibility:

ROBCAD/Spot

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**http://www.tecnomatix.
com/**

ROBCAD/Spot is a set of tools for spot-welding process design, validation, and off-line programming with robots in the body shops of automotive assembly plants. It enables concept formulation for the welding process, automates equipment placement, simplifies spot-welding gun design, verifies reachability, optimizes welding cycle time, and ensures operation without collisions.

IRIX version compatibility:

ROSIN-NC-Werkbank©

Petra Wiegmink
General Manager
ROSIN GmbH
Roniger Weg 13
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Germany
011-49-2644-970030
011-49-2644-9700332 (fax)

The ROSIN-NC-Werkbank© (Werkbank (Germ)-workbench) is suited for all companies using a CAD system and CNC machines for production. It comprises a set of tools to * process digitized data or files in VDAFS format, * generate 2-to 5-axis NC-programs for all major CNC's, * visualize, customize and tune existing NC-programs, * generate milling programs directly from scripts or logos. The user interface is based on OSF/Motif, the command language can be chosen by the user. The ROSIN-NC-Werkbank runs on all SGI workstations. The tools help to increase the productivity since they largely facilitate all tasks around CAD and CNC.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

Rand Post Generator

Carl Vegelj
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Rand Technologies
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http://www.rand.com

The Rand Post Generator's unique graphical interface allows CAM users to create and modify their own post processors without learning a complicated computer programming language.

The Rand Post Generator was designed to be used with today's advanced CAM products and machining senters. It transforms generic cutter location information from NC programming systems into machine specific G code. A wide variety of machine tools are supported including mills, lathes, wire EDMs, punch presses, CNC grinders and mill-turn centers.

IRIX version compatibility: 5.3, 6.2 Certified

SHOPNEST (Intergraph Shop Floor Nesting Option)

Kim Corbridge
Product Mktg Manager
Intergraph Corporation
MS GD 3000
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205-730-3701
205-730-3453 (fax)
****
**http://www.intergraph.
com**

The SHOPNEST package provides both interactive and automatic arrangement of parts on plate and sheet materials. Interactive nesting allows the user to dynamically arrange parts on a sheet of material using typical graphic manipulation functions such as Move, Rotate, Drag, etc. Automatic nesting allows the user to identify the quantity of each part to be nested, along with the nesting constraints for each part. The automatic nesting function then looks at all the parts and their constraints, and arranges them in an efficient manner on the material. The nested parts are compatible with Intergraph NC products for subsequent processing of the shapes.

IRIX version compatibility:

SIMFACTORY® II.5/SIMPROCESS®

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CACI Products Company
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La Jolla, CA 92037
USA
619-457-9681
619-457-1184 (fax)
http://www.caciasl.com/

SIMFACTORY® II.5/SIMPROCESS® is an easy-to-use, menu-driven analysis tool that predicts factory and business process performance through simulation. With SIMFACTORY II.5/SIMPROCESS, you quickly simulate alternative scenarios and compare the performance measures of the simulated systems.

SIMFACTORY II.5 is a library of elements for modeling factories; SIMPROCESS is an additional library of elements useful for studying workflows such as paperwork and phone call processing, or health care management. Together they provide an animated picture of your process in action.

CACI offers a free, no-obligation, 60-day trial of the fully documented product, including free training, complete documentation, and full technical support.

IRIX version compatibility:

ST-ACIS

Blair Downie
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518-276-8471 (fax)
downie@steptools.com
http://www.steptools.com

ST-ACIS is a bi-directional translator for converting STEP AP 203 class 6 geometry into ACIS. STEP is now ISO standard for the exchange of product data. ST-ACIS can be used as a stand alone translator to convert between STEP and ACIS BREP models, or by application developers to add STEP technology to their ACIS based solid-modeling applications.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

STRIM

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Courtaboeuf
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http://www.matra-datavision.fr/

Aesthetic challenges, technical constraints, economy...each form, each model, each new design project is a test of the designer's skill and ingenuity. This is why the STRIM Professional Solutions integrate the know-how and the industry-specific tools designers need to do the best job in the shortest possible time. STRIM addresses styling and industrial design in particular, as well as tooling and the plastics industry. STRIM was conceived with a specific goal in mind: to provide high-performance solutions that are perfectly adapted to the special demands of styling, reverse engineering, part manufacture, and analysis. STRIM features are: dynamic free-form modeling, precise rapid prototyping and reverse engineering, wide range of tools for plastic part analysis, and top-performance machining in 3 to 5 axes.

IRIX version compatibility:

Safework™ 2.53

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Canada
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514-931-2118 (fax)
robert@safework.com

Safework™ is a software used as both a research and an industrial tool for the ergonomic analysis, design and correction of workstations and industrial products.

Safework imports workstations previously designed with CAD software and generates 3-D fully articulated anthropometric mannequins representing the population to be studied. It allows manipulation, simulation, animation, as well as reach, vision, postural analysis and all interactions between mannequins and the environment.

Safework is intended for all professionals who design environments that receive and accommodate people, and has applications in the field of automotive, manufacturing, medical, human factors, entertainment & virtual reality.

IRIX version compatibility: 5.x6.x

Safework™ 2.53

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Safework is intended for all professionals who design environments that receive and accommodate people, and has applications in the field of automotive, manufacturing, medical, human factors, entertainment & virtaul reality. entertainment & virtual reality.

IRIX version compatibility: 5.x, 6.x

Mechanical CAD/Mechanical CAM

ShapeAnalysis ™

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ShapeAnalysis 2.0 is a program for the display, manipulation, and analysis of 3-D objects. Developed to analyze digitized human body data, ShapeAnaysis is especially useful with irregular 3-D shapes. Major functions include data sampling, automated fit testing of equipment models on body surfaces, 3-D Mr. Potato Head, high resolution 3-D morphing, generation of average and extreme shapes, and numerous measurement capabilities. ShapeAnalysis is currently for apparel, sizing,a nd equipment design.

IRIX version compatibility: 5.x, 6.x

Soft Assembly™

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Technology, Inc.
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USA
408-474-3227
408-432-3490 (fax)
Lisa.Lambro@adept.com
http://www.silma.com/

Soft Assembly™ is a visualization and verification software tool to view and dynamically manipulate assemblies of CAD parts. Soft Assembly allows designers and manufacturing engineers to check assembly feasibility, sequences and trajectories within the assembly environment, without the cost and time invested in building physical prototypes.

Using Soft Assembly, engineers and designers can instantly fly through a proposed product to communicate ideas and evaluate alternative designs. Realistic rendering and real-time animation provide instant understanding of even the most complex assembly.

Soft Assembly is the ideal tool for product design synthesis and for performing manufacturability and maintainability studies. Systematic use of Soft Assembly results in early detection of design errors and a shorter time-to-market.

IRIX version compatibility:

Soft Machines®

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Soft Machines® is a software machine tool used by NC programmers to verify post-processed machine code data. With Soft Machines, NC programmers and operators visualize in realtime the entire machining operation, including tools, fixtures, palletizers and parts. The simulated machine tool motion can be used to verify part programs and reduce prove out time leaving the real machine tool available for production.

After running Soft Machines, programmers will know:

- If the program will run collision free.
- How the machine components interact.
- How long the part will take to machine.
- If the tool set-up is correct.
- If the machine tool will exceed its limits.

IRIX version compatibility:

Solid Modeling

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Israel
972-3-531-2121
972-3-531-2140 (fax)
http://www.cimatron.com/

Cimatron Solid Modeling is parametric and feature-based to facilitate the conceptual design process. Models are created as combinations of objects and design-specific features such as rounds, chamfers, shells, and holes. Parameters and constraints can be flexibly defined as you go. You're never restricted by the order in which the model was created. Just start sketching - you maintain full control over constraints, with helpful construction guidelines. The system's parametric nature means that with the simple change of any parameter, all related features are updated.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

Spacecraft Command Language (SCL)

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http://www.sclfl.com

Spacecraft Command Language (SCL) is a powerful real-time expert system for complete spacecraft control - from testing to in-flight command and control to ground operations. This integrated approach to expert system technology reduces development time and cost, simplifies onboard and ground operations, and enhances reusability.

SCL represents both a powerful programming language and a software system that implements that language. SCL is a fifth-generation language, fully integrated with a rule-based expert system, enabling users to optimize command control and monitoring functions to simplify their development. The SCL software system is both generic and portable. One software system can support test equipment, ground stations, and test vehicles, reducing the amount of custom code that you must produce for each application.

IRIX version compatibility: 5.x

Special Custom Postprocessor

Petriva Justice
President
Justice, Peterson &
Associates, Inc.
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USA
714-893-0600
714-893-2995 (fax)
jpa@netcom.com

JPA's Special Custom Postprocessor (SCPOST) will process CLFILE data for mills, lathes, wire EDM's, lasers, thermo cutters and punch presses. Mills and lasers may be up to 9 axis with 2, 3, 4, or 5 axis geometry. Lathes may be up to 5 axis with single or dual turrets and living tooling. The lathes geometry may be 3 axis for the live tooling. Wire EDM's may be up to 5 axis with 5 axis geometry using tool vectors for wire tilt. The machine tape output from the Special Custom Postprocessor adheres to all rules and formats for all functions of each machine.

IRIX version compatibility: 5.3, 6.x

Stereolithography Apparatus

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26081 Avenue Hall
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805-295-5600
805-295-0249 (fax)

3D Systems Stereolithography Apparatus turns a CAD file into a model or prototype in a few hours. The company offers a full range of SLAs from basic entry level models to large, top of the line machines offering a wide range of options. Though the SLAs vary significantly in part size capacity and throughput, they all offer similar features:

- Flexibility: Use in wide range of applications including concept modeling, fit verification, masters for range of plastics molding processes, patterns for investment casting and sand casting.
- Accuracy: Ideal for parts with complex geometries.
- Adaptability: Builds multiple identical or unique parts simultaneously.
- Variety: Select from multiple polymers to support a variety of applications. Most SLAs support the company's QuickCast™ build style for investment casting applications.
- Cost effectiveness: Virtually all polymer solidified in part building composes the actual part; thus no material is wasted. Runs unattended during the build cycle.

IRIX version compatibility: 5.3

Mechanical CAD/Mechanical CAM

TED

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TED - A full featured text editor, NC data processing utility, and reverse post-processor. Features include the conversion of NC data files from one machine format to another (including a variety of circular interpolation and floating point formats); mathematical manipulation such as rotate, translate, and mirror; and the formatting of sequence numbers. TED can reverse post-process NC data files into a format suitable for NC verification packages such as NCLIPV. Even complex 4 and 5-axis NC data files can be processed.

IRIX version compatibility:

TELEGRIP™

Marketing Department
Deneb Robotics, Inc.
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PO Box 214687
Auburn Hills, MI 48321-
4687
USA
810-377-6900
810-377-8125 (fax)
marketing@deneb.com
http://www.deneb.com/

TELEGRIP™ provides a 3-D graphical interface for previewing, interactive programming, and real-time bilateral control of remote robot and device controllers in harsh or complex environments, such as space, nuclear, and hazardous waste sites. It provides operators a system for the safe, quick, and efficient remediation of hazardous environments from a single, dynamic point of control and input that is isolated from all operator hazards.

TELEGRIP is developed upon industry software standards and network protocols to provide true interoperability. Accurate, 3-D kinematic models of the robot and workspace components allow the operator to pre-plan and optimize robot trajectories before the program is automatically generated. When sensors are integrated, TELEGRIP can verify geometries in the scene and dynamically update the model to automatically adjust robot motions in real-time.

IRIX version compatibility:

TOPsolid®

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Sales Manager
TOPCAD
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France
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011-33-1-53-76-08-87 (fax)

TOPsolid® is a general purpose 2-D/3-D CAD system including an exact parametric solid and surface modeler (Parasolid based). Some very interesting and dedicated options can be added for different professional applications: sheetmetal, design, piping, machining, and mold applications.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

TREE/Pro™ for Pro/ENGINEER®

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TREE/Pro™ for Pro/ENGINEER® is the first fully integrated, associative, and automatic family tree drawing generator for Pro/ENGINEER.

TREE/Pro develops a family tree (level breakdown) drawing showing the full or limited hierarchy of a product structure on a Pro/ENGINEER drawing. In a short time, a drawing tree is generated automatically from Pro/ENGINEER assembly. When changes are made to the assmebly, the drawing updates automatically. Parameters may be displayed.

IRIX version compatibility: 5.3

TRIFIX

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As an STL verification and improvement module, TRIFIX accepts triangulated data from a variety of sources including ASCII and binary STL. All topological errors can be displayed and repaired quickly. This is done not simply by filling the gaps with triangles but by adjusting the way surrounding triangles are connected to the part. Ensuring maximum component efficiency.

Incorrectly connected triangles can be isolated and removed easily, with a section model available for dynamic viewing and comparison in either mesh or colour shaded form.

IRIX version compatibility: 5.3, 6.0, 6.2, 6.3

TeamSolutions®

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TeamSolutions® software enables engineering teams to collaborate by supporting virtual collocation. By enabling the team to share 2-D & 3-D CAD/CAM and related information with associated text, graphics, and audio annotations, geographically dispersed engineering teams can engage in rich product conversations wihtout leaving the office and independent of their chosen vendor platform. This shortens the product development cycle and results in getting higher quality products to market in a shorter period of time. TeamSolutions maintains 2 collaboration modules, a real-time componentcalled Team Conference and a store & forward component called TeamExchange.

IRIX version compatibility: 5.2, 5.3

Translator for Wavefront

Frances Veltre
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Ellicott City, MD 21042
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410-360-4682
410-360-4682 (fax)

Autocad translator, bi-directional to/from Wavefront, the translator will convert DXF files from autocad, decreasing the triangulation that occurs and will allow more drawing entities to be converted.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

USM CRISPIN 3-D (CRISPIN Profile and CRISPIN ShoeDesign)

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Machinery Ltd.
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44-0-116-2902009 (fax)
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co.uk

USM CRISPIN 3-D is a 3-D design system for shoemaking. It encompasses the whole preproduction process of designing the shoe, evaluating the design, producing sample patterns (model size), and production of graded patterns. An interactive costing system (combined with a commercial database) allows the designer to cost a shoe during the design process. A key feature is the simultaneous, display on-screen, and development of the 3-D design and the 2-D pattern, and the ability to work on either at any time. Starting from a 3-D digitized last image, the 3-D design visualization can be on or off the last; material thickness, colors, textures, etc., can be defined.

IRIX version compatibility:

USM CRISPIN Pattern Engineering

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USM CRISPIN Pattern Engineering is a CAD system for 2-D style development and grading of shoe part patterns. Input is entered by digitizing a 2-D standard. Output is cut part patterns from sheet material (paper, plastic, etc.) and cut shoe components "direct" from leather or synthetic upper materials. Links are provided to communicate with other CAD systems and costing systems. An "assessment" procedure enables the pattern engineer to identify the pattern "efficiency". The key benefit is the reduction in preproduction lead times.

IRIX version compatibility:

USM CRISPIN StitchTec

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USM CRISPIN StitchTec is a CAD system for users of automatic stitching machines, used primarily in shoemaking. Input is derived by digitizing or transfering part shapes (patterns) from pattern engineering. The purpose is to design the tooling for the stitching machine for a specific style of shoe, and the detailed design of the stitching path. The resultant "stitch program" includes parameters such as stitch length, stitch speed, and back-tacks. Output is to various peripherals including automatic stitching machines. Reduction of manual skills in making tooling and reduced lead times are the key benefits.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

UltraArc™

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http://www.deneb.com/

UltraArc™ is an interactive, 3-D graphic simulation tool specifically for designing, optimizing and off-line programming robotic arc welding workcells. UltraArc can automatically generate and download robot motion and process programs. Workcells are developed using built-in libraries of robots, positioner tables, gantries, weld guns, and related equipment. These integrated databases are accessed via a Visual File Interface and selected with a mouse click for fast model building. Other workcell components can be created in the integral CAD package or imported from other CAD packages via IGES, DXF, and direct translators. A built-in surface modeling package provides easy modification and optimization of imported surface data.

IRIX version compatibility:

UltraFinish™

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UltraFinish™ is an interactive, 3-D graphic simulation tool specifically designed for off-line programming and optimizing robotic surface finishing applications. UltraFinish can automatically generate and download robot motion and process programs. Workcells are developed using built-in libraries of robots and related equipment. Other workcell components can be created in the integral CAD package or imported from other CAD packages via IGES, DXF, and direct translators. A built-in surface modeling package provides easy modification and optimization of imported surface data.

Robot programs are created graphically, simply by positioning points on the workpiece. All process data associated with each point is stored with the position data.

IRIX version compatibility:

UltraPaint™

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UltraPaint™ is an interactive, 3-D graphic simulation tool specifically for designing, optimizing and off-line programming robotic painting workcells. UltraPaint can automatically generate and download robot motion and process programs. Workcells are developed using built-in libraries of robots, standard paint guns, door openers, and related equipment. Other workcell components can be created in the integral CAD package or imported from other CAD packages via IGES, DXF, and direct translators. A built-in surface modeling package provides easy modification and optimization of imported surface data.

UltraPaint optimizes critical factors such as material utilization, fluid flow rate, gun on/off times, robot position, TCP speed, cycle time, collision detection, and multiple I/O communications.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

UltraSpot™

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UltraSpot™ is an interactive, 3-D graphic simulation tool specifically for designing, optimizing and off-line programming robotic spotwelding workcells. UltraSpot can automatically generate process programs and download to the robot. Workcells are developed using built-in libraries of robots, weld guns, fixturing, and related equipment. UltraSpot features specific functions for modeling weld gun arms, shanks, and holders. Other workcell components can be created in the integral CAD environment or imported from other CAD packages via IGES, DXF, and direct translators.

Physically-based Modeling and Minimum Energy Relaxation techniques are used to simulate cables influenced by gravity loads, stiffness effects, accelerations due to robot motions and contact forces.

IRIX version compatibility:

Unigraphics®

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Unigraphics® is an interactive graphics system providing complete design, drafting and product capabilities with a 3D database. It has integrated solutions for solids modeling, mechanism synthesis and analysis, finite element modeling, ANSYS and NASTRAN pre- and post-processing, IGES interfaces, Moldflow interface and user-customized programming languages. Using the same database the manufacturing engineer can tie into capabilities such as multi-axis machining, flat platterns, nesting, forgings, and factory information management. Modules available include the graphics interactive programming languages, graphics schematics, graphics finite element, graphics multi-axis machining, graphics lathe, quality assurance and solid modeling. Major users of Unigraphics are in the following industries: aerospace, automotive, government heavy equipment, high-tech electronics, consumer products and industrial manufacturing.

IRIX version compatibility:

VALISYS/Design™

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Engineering, Inc.
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info@valisys.com
http://www.tqei.com

VALISYS/Design™ helps verify that tolerances specified for a manufactured part accurately reflect design intent and conform to various design standards (ANSI Y14.5 and ISO R1101). A precise 3-D computer model of the tolerances is used to ensure that component and assembly dimensional requirements are clearly snd correctly deifned. VALISYS/Design reinforces GD&T training with descriptive on-screen messages explaining dimensioning and tolerancing errors.

IRIX version compatibility:

669

Mechanical CAD/Mechanical CAM

VALISYS/Inspection™

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VALISYS/Inspection™ is used to run and monitor inspection operations on the shop floor. VALISYS/Inspection uses any machine independent DMIS program to drive over 30 supported CMM's and NC machine tools. VALISYS/Inspection allows you to perform on-machine modifications to the inspection programs during execution and review real-time analysis results of the measured features. VALISYS/Inspection enable syou to easily analyze manufactured parts against their original CAD design tolerances to assess their quality and identify manufacturing process errors. The format of the results can be customized to meet shop floor preferences.

IRIX version compatibility:

VALISYS/Programming™

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VALISYS/Programming™ generates off-line machine independent DMIS programs for CMM's and NC machine tools. The program is reviewed and modified on the screen prior to running the inspection. Total cell simulation and 3-D collision detection are available. No matter how complex the part is, VALISYS/Programming virtually eliminates the trial and error aspect of programming and ensures reliable programs prior to the machine or part being available.

VALISYS/Programming allows you to compare the measured data of an inspected part against the original CAD design tolerances. This greatly assists in "visualizating" trouble spots and critical areas.

IRIX version compatibility:

VALISYS/Reverse™

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VALISYS/Reverse™ creates accurate 3-D CAD models from physical parts or master tools. These models can then be used with other CAD modules (NC machining, Drafting, etc.). VALISYS/Reverse performs best-fit regression analysis on inspected data to produce smooth 3-D splines and geometric features. All inspected data is available if you wish to use your own customized data regression routines. Model acuracy levels are adjustable data collection time.

IRIX version compatibility:

VARIMETRIX Drafting

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USA
714-553-1077
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conway@nccs.com

VARIMETRIX (VX) Drafting is used to create professional quality drawings either as associative layouts from 3-D models, by using conventional 2-D drawing tools, or through any combination of these methods. VX drawings are 'intelligent' because your design intent is captured and available for easy modification. Parametric sketches are created easily using the intuitive, cursor sensitive, Quick Pick feature which dynamically constrains entities as they are being created. VX Drafting provides a complete set of both automatic and interactive dimensioning and annotation tools to quickly detail ISO, JIS and ANSI standard drawings. VX Drafting can be purchased separately or bundled with the powerful VX Modeling package.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

VARIMETRIX Manufacturing

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VARIMETIRX (VX) Manufacturing is a solids-based, fully associative CAM system used to automate the creation of NC tool paths. VX Manufacturing tool path generation capabilities include: fast creation of gouge-free roughing and finishing tool paths across multiple solids and/or surfaces; sophisticated Z-level roughing; and 'rest' machining which allows for the cleanup of material left by a previous tool. VX Manufacturing, used in conjunction with VX Modeling provides full associativity between 3-D solid models and NC tool paths.

IRIX version compatibility:

VARIMETRIX Modeling

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VARIMETRIX (VM) Modeling is a parametric 3-D solids and surface modeler. The unique VX Unified Parametric Geometry (UPG) engine integrates solid, surface, and wireframe geometry with a single user interface, database, and parametric strategy. Controlled associativity ensures that design changes are reflected in all models, drawings, and NC tool paths. VX also supports unlimited Undo and Redo. VX solid modeling techniques include primitives, features and booleans. In addition, a solid can be created by joining together any number of free-form surfaces. VX elegantly combines solid and surface modeling offering over 70 surface creation commands. VX offers a complete CAD/CAM/CAE solution including drafting, assembly modeling, and NC manufacturing.

IRIX version compatibility:

VAnICS

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W.ETN.COM

VAnICS is a predictive maintenance system used to monitor machinery. It is usable as a continuous on-line system, or as a periodic test instrument. It analyzes vibration, acoustic, and video signal types, and may perform control functions that are user definable.

IRIX version compatibility: 5.2, 5.3

Mechanical CAD/Mechanical CAM

VERICUT® NC Simulation & Verification

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VERICUT® is a software program that enables NC programmers to reduce or eliminate prove-outs by simulating NC machining and full machine tool movement on a computer. It works with post-processed NC code and output from all CAD/CAM systems.

This powerful visual inspection tool highlights fast feed errors and potential crashes/collisions during NC tool path development, setup, and testing. VERICUT supports two-axis through complex multi-axis milling, drilling, and turning operations as well as mill/turn, EDM, and other types of machining.

VERICUT provides tools for taking 3D measurements of the entire part and compares the simulated part to the design model to reveal differences and performs constant gouge-checking.

VERICUT automatically determines the best feed rate for each cut based on the machining conditions and volume removal rate. The result is greatly reduced machining time: usually 50% or more.

VERICUT simulates entire machine tools just as they appear on the shop floor and supports advanced NC machine control functions. The result is realistic machine tool animation to check for machine tool collisions and over travel. VERICUT is also a powerful reverse post-processor. The program translates machine code data (G codes) into any user-defined NC data format.

IRIX version compatibility: 5.3, 6.2

VISI-CAM

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Promotion de Ventes
Missler Informatique
4, rue Gustave Eiffel
Zai la Mariniere
Evry CEDEX 8 BP1130,
91911
France
011-33-1-60-86-47-69
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Today's state of the art machining tools combine milling and turning technology. Such architectures are, most of the time, manually programmed or require more than one software package.

VISI-CAM brings the solution to mechanical companies who wish to take advantage of those real new production capacities. With the usage of technology tools database, VISI-CAM offers a very simple and efficient way to program.

Users can treat milling in from 2 to 5 axes continuously or on positioning (axes A, B, C). Users can also do turning into 2, 3, or 4 axes (two turrets simultaneously).

IRIX version compatibility: 5.2, 5.3

VISI-MILL

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011-33-1-60-86-47-69
011-33-1-60-86-47-22 (fax)

More and more, users must face the complexity of simple and complex forms.

VISI-MILL is a new technology which combines two complement applications: a CAM with 2.5 axes and surface CAD/CAM for creation and manufacturing of complex forms.

Users can treat miling in from 2 to 5 axes continuously or on positioning (axes A, B, C).

IRIX version compatibility: 5.2, 5.3

Mechanical CAD/Mechanical CAM

VME 3.2

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Altri's View, Markup, Edit workbench tools run on a variety of platforms and provide full functionality displayed on standard desktops. Features include high-speed viewing of more than 150 document types, up to 255 vector layers, full color, complete set of editing, annotation and redline tools.

IRIX version compatibility: 5.3

VSA-3D/Pro

Laura Harrell
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VSA-3D/Pro perfoms a comprehensive 3-D, statistical simulaiton of the manufacturing and assembly process and dermines:

- The amount of variation due to component geometry, tolerances, assembly sequence and assembly methods (fixtures, bolt to hole cleaaraance, weld sequence, etc.)
- The causes of variation, presented graphically in order of percent contribution.

VSA-3D/Pro is directly integrated with Pro/ENGINEER.

IRIX version compatibility: "5.3, Pre 5.x"5.x6.x

VSA-GDT/Pro

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VSA-GDT/Pro analyzes the GD&T scheme defined in Pro/ENGINEER to determine if it is correct according to the ANSI/ISO standard. VSA-GDT/Pro determines if each feature:

- Is correctly constrained in form, orientation, location, and size.
- Has syntactically correct Feature Control Frames.
- Is related to the master datum reference frame through one unique path. VAS-GDT/Pro is directly integrated with Pro/ENGINEER.

IRIX version compatibility: "5.3, Pre 5.x"5.x6.x

Varimetrix Drafting

David Schultz
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Santa Ana, CA 92707
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714-434-1080
714-434-1688 (fax)
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The Varimetrix Drafting module allows you to create professional quality drawings either as associative layouts from 3-D models, by using a comprehensive set of traditional 2-D CAD drawing tools, or through any combination of these methods. Whichever approach you choose, your drawings will be "intelligent" because your intent will be captured and available for easy modification. Fully parametric 2-D sketches are easily created using the intuitive, cursor sensitive Quick Pick feature, which dynamically constrains entities as they are being created. Powerful drawing techniques such as arrays, blocks, symbol files, entity instancing, and sub-drawing referencing allow for the creation of efficient, compact databases.

IRIX version compatibility: 5.x, 6.2 Certified, 6.3 Certified

Mechanical CAD/Mechanical CAM

Varimetrix Manufacturing

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The Varimetrix Manufacturing module expands the scope of traditional CAM products to include planning and resource management as well as NC programming--in a single, fully integrated package.

Varimetrix Manufacturing is a feature based, object oriented CAM system. Features consist of both geometric entities and manufacturing attributes (such as material thickness) which can influence the manufacturing process. Objects are direct analogies to physical and procedural entities encountered in the manufacturing environment such as cutting tools, machines, setup, tool path operations, and speeds and feeds. Objects can be stored in libraries for centralized management and reference, making process standardization easy.

IRIX version compatibility: 5.x, 6.2 Certified, 6.3 Certified

Varimetrix® VX

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Varimetrix® offers a powerful array of engineering and manufacturing tools based on the proprietary Unified Parametric Geometry (UPG) architecture that integrates wireframe, surface and solid geometric entities. A flexible parametric modeling method, unique to Varimetrix, allows the user to apply parameters to a model before, during, or after the construction process.

A full-featured Drafting module, supporting ANSI, ISO and DIN standards, provides tools for generation of associative layouts from 3-D models, as well as comprehensive drawing and detailing.

Varimetrix Cam is based upon an object-oriented architecture, designed specifically for the complex requirements of manufacturing.

IRIX version compatibility: 5.3, 6.2

Virtual NC®

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Virtual NC® is an open architecture, 3-D, graphic machining process simulator that precisely emulates an entire machine tool and NC controller. Virtual NC eliminates uncertainty by duplicating the true functionality and characteristics of the machine tool including fixtures, tools, tool changers, attachments, workpieces, and most important, the NC controller. Processes available are milling, turning, punching, and grinding, with no restrictions on the axes a machine can have. Virtual NC can model entire machine setup, machine design, and machine center layout; optimize existing programs, saving process time and tooling costs; and, Virtual NC is ideal for precious materials, advanced machine tools, and complex machine processes.

IRIX version compatibility:

Mechanical CAD/Mechanical CAM

Virtual Workshop

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810-524-4914 (fax)
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http://www.tecoinf.de/

Digital mock-up in the Virtual Workshop can iron out design problems at an early stage. It makes sound economic sense and it's an essential tool for product designers everywhere.

Software from TECOPLAN INFORMATIK facilitates tremendous fast and completely three-dimensionally reviewed assemblies of highly complex products such as aircrafts or automobiles - all components are automatically checked for collisions, contact surfaces and minimum clearances (optional with respect to ceratin tolerances). Dynamic assembling allows the simulation and check of parts in movement as well as the simulation of mounting paths. Photorealistic visualization of the individual components clearly identifies problem zones during on-screen assembly.

IRIX version compatibility: 5.x, 6.0, 6.2, 6.1

VisFly™ Interactive CAD Visualizer

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VisFly™ enables engineers to interact with complex CAD designs in real-time and lets them "fly through" large models to view assemblies and components in detail. VisFly seamlessly integrates within existing CAD/CAM/CAE environments and with a push of a button, VisFly models are automatically updated from the CAD system.

IRIX version compatibility: 5.3, 6.2

VisLab®

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VisLab® is an animation and rendering software product that is tightly integrated with a wide range of MCAD and engineering analysis packages. VisLab uses advanced rendering technology to produce 3D animations from CAD models at unprecedented speeds, enabling users to transform complex, technical information into clear, accurate, visually accessible computer animations.

VisLab features an easy-to-use, single-window interface, minimizing the time required to set up an animation. In addition, VisLab is optimized to render images using the SGI graphics hardware and creates sophisticated 3D images in seconds. Such time savings are crucial for engineers, who cannot afford to wait minutes or hours for animations to be created.

IRIX version compatibility: 5.3, 6.2

VisMockUp™

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VisMockUp™ is a powerful new digital prototyping software product that combines 3D visualization technology with total design packaging analysis functions, allowing users to identify and eliminate design flaws early in the development cycle, thereby dramatically reducing the costs for product development. VisMockUp offers a robust set of analysis tools designed to analyze an entire assembly, including interference and collision detection, proximity and attribute filtering, and measurement control. In addition, VisMockUp provides users with a wide range of collaboration tools that take full advantage fo the corporate intranet. For example, Digital Stickers™ can be posted on assemlies,a llowing users to annotate their models by attaching graphics, video and text and communicate this information across the corporate intranet.

IRIX version compatibility: 5.3, 6.2

Mechanical CAD/Mechanical CAM

VisModel™

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VisModel™ is a powerful 3D editing and modeling software product designed to redefine and create polygonal models. VisModel provides maximum flexibility and control to manipulate models with a high level of accuracy.

IRIX version compatibility: 5.3, 6.2

WorkNC

Connie Roman
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WorkNC is a complement to existing CAD/CAM systems for automating the traditionally user interactive cutter path generation process on surfaced parts and solid models. WorkNC accepts data via IGES or available direct translators. WorkNC is automatic in the sense that the operator is only required to input a few basic tool path parameters such as tool diameter, spindle speed, and type of cut desires. WorkNC then automatically determines how to optimally machine solid blocks, pre-roughed shapes, or castings. WoprkNC is available on both DOS and UNIX platforms.

IRIX version compatibility: 5.2, 5.3

WrapStylerPro

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Sales & Mktg. Manager
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WrapStylerPro is a software tool dedicated to the material covering of 3D shapes simulation. It is specially designed for textile applications and automotive trimming operations.

Based on an exclusive technology for the "flattening" of 3D shapes WrapStylerPro proposes the "state-of-the-art" in the domain, resulting from over five years of research and development.

IRIX version compatibility: 5.3, 6.x

geomagic Wrap™

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geomagic Wrap™--the new software standard for rapid prototyping and reverse engineering. Within an hour from installing geomagic Wrap, you'll be able to generate surface and solid models from virtually any point clouds data. Refine your models interactively with comprehensive editing tools and create watertight STL files in no time.

IRIX version compatibility: 5.x, 6.x

Mechanical CAD/Mechanical CAM

numerang

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Native UNIX processes for numerical control part program management compliment any Silicon Graphics CAD/CAM or NC programming system.

Disk resident NC part programs, transmitted to or from the factory floor, avoid mylar tape, black boxes, floppys or "sneaker-net". Computer operator not required for program transmissions. Central storage assures accurate backup and timely programs. Transactions passively logged. Advanced features possible depending upon NC capabilities.

Often customized for client requirements, libraries may include fiber optic or wireless NC connections, database management, command line or "GUI", barcode input, voice control, network or modem access.

IRIX version compatibility: 5.3, 6.2

Mechanical CAD/Mechanical CAM