3-D WORLD

News For The CADKEY/DataCAD User
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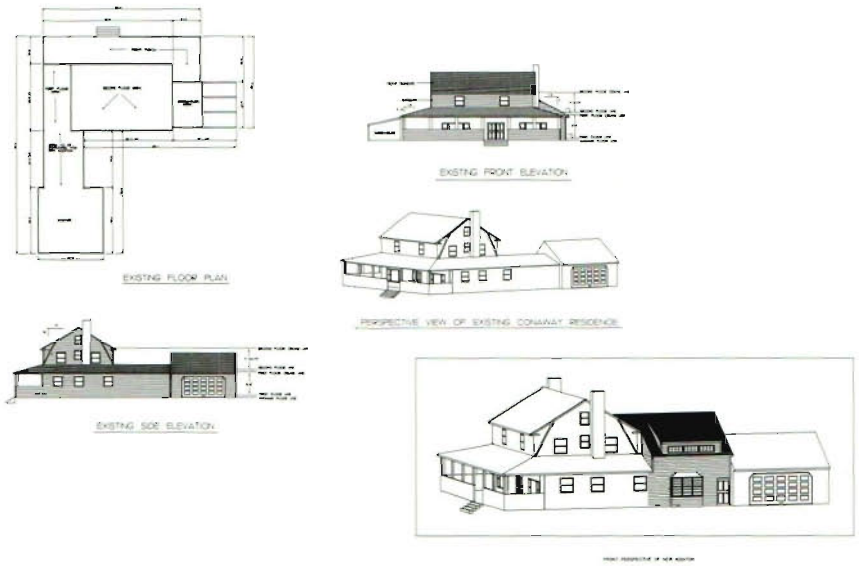

Drawings of Alan Conaway's home in Swansea, MA, showing original gambrel-colonial house and proposed two-story addition.

DataCAD™ Helps User To Expand Business

Allen Conaway wanted to build a two-story addition onto the wing of his gambrel-colonial home in Swansea, Massachusetts, and harmonize the new construction with the existing house. Allen found it difficult for others to visualize exactly what he wanted ... until he visited R.W. Chew Company, a design/build remodeling contractor in Barrington, Rhode Island. R.W. Chew specializes in remodeling existing homes.

3-D Model of House

When Allen described what he wanted to Ray Silva, Vice President, Remodeling Division, and David MacDougall, Design Consultant, they created a true three-dimensional model of the current Conaway home using DataCAD™. The DataCAD file of the existing house contained 17 layers with individual layers for specific types of architectural data.

Then, Ray and David began designing what Allen Conaway had described. They added nine more layers in the DataCAD file to *build* the two-story addition, once again choosing to put specific types of data on individual layers. "Using different layers allows the designer to create a model of a particular project and not just a drawing," David said. "This is very important in remodeling because you want customers to express what they want. With DataCAD, I can show them different options and quickly get their input on the design." Ray and David designed the addition with several different variations for the customer to consider.

When they were ready, Bob Chew, President of the R.W.

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Microtecture Acquisition Completed

Friday, July 14, 1989, was a major day in CADKEY's history. In Charlottesville, Virginia, Livingston Davies, President of CADKEY, INC., completed the acquisition of Microtecture Corporation.

"The resources that CADKEY can bring to bear on the development of the DataCAD product line," Davies said, "will result in increased market share. DataCAD has established an excellent position and reputation in the marketplace."

"We recognize," he added, "that DataCAD users have made a significant investment in their systems and software. We intend to protect their investment."

"The needs of the users and their businesses will be the driving

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DataCAD Helps User To Expand Business

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Chew Company, Ray, and David showed Allen the design on DataCAD. By displaying particular sets of layers in the data file, they were able to show the house as it exists, and how the addition would change the house.

Customer Invited to Participate in Design

Allen felt that the proposed changes did not yet express his vision of an addition that would look as if it had been part of the original building. Working together for about two hours, designing *live* on DataCAD, Allen, Bob, Ray and David developed an addition that Allen felt would be in harmony with his home's gambrel-colonial style of architecture. "I got a feel for what it was going to look like," Allen said. R.W. Chew Company got the job.

In its 12-year history, Bob Chew's company has developed an enviable record of achievement in remodeling homes like Allen Conaway's. R.W. Chew Company provides services ranging from initial design through complete construction. In May 1987, **Remodeling Magazine** named Bob Chew one of the "Top 50" remodelers in the United States.

Recent DataCAD Users

Until mid-February 1989, R.W. Chew Company did all of its design work on drafting boards, using paper and pencil. On February 15, R.W. Chew began using DataCAD. Now all of the company's design work is done on DataCAD. "One benefit of using a CAD system is that different people can work on the same design," said Deborah Child, Vice President, Kitchens Division. "With a drawing done by hand, that is impossible because different people have different styles of handwriting."

Deborah was given the task of researching available CAD software and chose DataCAD because of its ease of learning, low cost for multiple stations, and high quality 3-D perspectives. David recommends DataCAD without any reservations. "DataCAD is the premier architectural CAD system," he said.

Accuracy in Dimensions

Ray declared that the mathematical accuracy of the dimensions generated by DataCAD is one of the system's greatest features. This allows tighter control of subcontracting for electrical wiring, plumbing, and pouring concrete, among other things. R.W. Chew is currently researching DataMERGE which will speed up the cost estimating of their DataCAD drawings.

Seamless 2-D / 3-D

Bob Chew finds that the seamless transition from 2-D to 3-D is Datacad's most useful feature. "You create an entity in X and Y (2-D); then you add the Z height, and you can visualize it in 3-D," Bob said. "That one entity can be used not only in the floor plan, but also in the elevations and in the perspectives of the building."

Unexpected Benefit

Since February 15, 1989, DataCAD has produced an unexpected secondary phenomenon. R.W. Chew now completes its architectural drawings so rapidly that the company can provide CAD services to other contractors who do not yet have CAD facilities. "An added benefit to this relationship would be that the contractors could buy from us the kitchen cabinets that they specify in their plans," Bob said.

"We bought DataCAD because of the quality of the product," Bob added, "but we were concerned about Microtecture's future. When we learned that CADKEY had acquired Microtecture Corporation, we knew that DataCAD was in safe hands. It assures DataCAD's leadership in the future."

Microtecture Acquisition Completed

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force behind new developments in the DataCAD products." Davies concluded, "We look forward to growing our businesses together with them, as part of the greater CADKEY family."

New A/E/C Product Group Integral Part of CADKEY

"We shall integrate Microtecture into CADKEY, INC. as the A/E/C product group," said Ted Heywood, Director of the new A/E/C product group. "This group will have a clear focus on developing, marketing and selling products for the A/E/C market, beginning with the DataCAD product set."

With the closing completed on July 14, the physical move to Manchester, Connecticut, took place during the week of July 17-21. "We are delighted," Heywood continued, "that the key marketing, development, and technical-support people from Microtecture have chosen to join us to build a new and exciting future for the A/E/C product group."

"On paper," he added, "moving plans always look very clear, simple, and organized. There will undoubtedly be a fair share of confusion. When you call CADKEY at (203) 647-0220 about A/E/C products, please have patience and understanding."

According to Heywood, CADKEY's regional Sales Engineers will be responsible for the organization, management, and support of the dealer channel and their customer base of end users. The A/E/C product group will strongly support the Sales Engineers' activities.

Heywood noted that CADKEY's Technical Services group will have a separate support capability focused on DataCAD products. Over time, the Technical Services group will become completely cross-trained in the DataCAD products to expand support resources.

Heywood also mentioned that CADKEY's present International Sales/Support, Educational Sales and Government Sales groups will handle DataCAD products in their respective areas, also strongly supported by the A/E/C product group.

DataCAD Promotion to Expand

The advertising, promotion, and distribution of the DataCAD product set will be expanded. "We distribute through expert dealers," Ted Heywood said. "It is reasonable to assume that some CADKEY dealers will qualify to distribute the A/E/C products, and that some DataCAD dealers will qualify to distribute CADKEY products." Qualification will be done by the regional Sales Engineers, on an individual basis. "They look forward to hearing from you, and to working together with you," he added.

"Welcome!" Heywood concluded, "to an exciting and mutually beneficial expansion, and a new chapter in our history."

A Note from the Editor

3-D WORLD now includes articles about CADKEY 3™, CADKEY SOLIDS™, CADDInspector™/ CopyCAD™, DataCAD™, as well as third-party products.

To make it easier for readers to find the articles of particular interest to them, **3-D WORLD** will feature sections of articles related to CADKEY and to DataCAD. Training information about all of our products will be included in the section CADKEY/ DataCAD Training In The U.S. and Canada.

Now that **3-D WORLD** is including articles about DataCAD, I believe that it is important for us to establish what we at CADKEY hope will be the relationship between **3-D WORLD** and **WindowIn on DataCAD**. **WindowIn on DataCAD** is a third-party newsletter published by C.L.Davis Consulting Associates of Middlebury, Vermont.

WindowIn on DataCAD is an excellent, very technically informative newsletter for DataCAD users. **3-D WORLD** does not seek to compete with **WindowIn on DataCAD.** We want to complement what **WindowIn on DataCAD** is doing.

For information about subscribing to **WindowIn on DataCAD**, contact C.L. Davis Consulting Associates, P.O. Box 502, Middlebury, VT 05753, (802) 388-7981.

Pace-setting Announcement...

Japanese Characters in IGES Translator!

CADKEY, INC. unveiled the first commercial IGES Translator that supports the use of Kanji characters (one of the three sets of Japanese characters) on July 17, 1989, during the IGES/PDES Quarterly Meeting in Buffalo, New York. IGES is an acronym for Initial Graphics Exchange Specification. PDES is an acronym for Product Data Exchange Specification. (Once the American National Standards Institute officially accepts a particular version of a *specification,* it becomes a *standard.*)

Until recently, IGES did not have any standard procedure to represent non-Roman character sets that use a two-byte internal representation. Now CADKEY's IGES Translator can input Kanji General Notes from, and output Kanji General Notes to, an IGES file in the standard format.

The new version of CADKEY's IGES Translator also supports reading and writing Kanji General Notes using the non-standard methodology employed in CADAM Inc.'s software. This feature will help customers to migrate to the new IGES standard format.

CADKEY 3™ (Version 3.5) supports the display of Kanji notes, as well as on-screen Kanji menus and prompts. An additional font file and a change in the *config.dat* file allow the display of Kanji notes in a CADKEY part file. CADKEY 3 (Version 3.5) runs on a variety of Japanese personal computers using the DOS operating system.

Two Significant Firsts!!

Pixelworks' New "Hi-Res" Driver Supports CADKEY 3 (Version 3.5)

Pixelworks, Inc. of Hudson, New Hampshire, announced on May 1, 1989, the availability of its graphics driver for CADKEY 3™ (Version 3.5) to run on their ULTRA CLIPPER GRAPHICS family of high-resolution display controllers. The graphics controllers for both PC-AT, 386 and PS/2 (MCA) have resolutions of 1280x1024 and 1024x768 pixels, with 256 colors and palettes of 4096, 256,000, and 16.7 million colors. Pixelworks is the first manufacturer of high-resolution graphics controllers to support CADKEY 3 (Version 3.5).

"We worked very closely with the staff of CADKEY, INC. to develop the graphics driver," said Rattan Dhar, Executive Vice President of Pixelworks. "Cooperation between our two companies has really paid off. Joint-development efforts of the last six months have allowed us to offer a product that is not only reliable but also outperforms 8514 and VGA graphics by at least a factor of two."

CADKEY graphics takes full advantage of 256 colors, and at 1280x1024 resolution provides unlimited viewports on a 19-inch screen. The driver uses the new CADKEY Graphics Driver Tool Kit. The Tool Kit is compatible with more than 200 third-party applications, making them available on the Pixelworks high-performance graphics subsystems.

Pixelworks has been manufacturing and marketing the ULTRA CLIPPER GRAPHICS family of controllers since 1986.

CADKEY First To Ship Graphics Driver Using TIGA Interface

CADKEY Users Can Expect 30 to 40 New Graphics Card Options Immediately!

CADKEY announced on August 1, at **SIGGRAPH '89**, that CADKEY 3™ (Version 3.5) includes a graphics driver using the newly developed TIGA (Texas Instruments Graphics Architecture) interface. CADKEY is the first CAD company to implement a TIGA-interface graphics driver in its current software. CADKEY 3 (Version 3.5) began shipping at the end of June, 1989.

The development of CADKEY's new driver will add an additional 30 to 40 new graphics card options to the more than 70 graphics cards that already run in conjunction with CADKEY. CADKEY users can expect this new TIGA-interface graphics driver to produce increases in speed in comparison with VGA, higher graphics resolution, added color options, and more.

"CADKEY is excited about this new driver written using the TIGA interface," explained Lance Merrick, CADKEY's Product Manager. "Now with one driver, we're able to support many graphics cards. And, because TIGA offers us a flexible way to keep pace with changes in hardware, our users, in turn, can get the highest performance from our products."

According to Jean Derick, Product Manager at Texas Instruments, the TIGA software interface makes personal computer applications run faster by optimizing communication and application execution between the 34010 processor and the 286/386-based host processors in DOS-based PCs. Boards tested on Texas Instruments' chip perform many graphics operations faster. So, graphics-intensive packages such as CADKEY 3 will run faster than they would on a VGA board. To date, more than 100 companies have made plans to market TIGA-compatible hardware or software products. Growth of the TIGA interface is being fueled by increasing demands for higher resolution and the falling price of 34010-based boards.

Texas Instruments, headquartered in Dallas, Texas, is a high technology company engaged in the worldwide development, manufacture, and sale of semiconductors, defense electronic systems, computer systems, industrial-automation and control systems, metallurgical materials, and consumer electronic products.

CADKEY's TIGA driver is included at no extra charge in CADKEY 3 (Version 3.5).

CADKEY 3 Linked to MAPICS II

ECSL-CADKEY of Gloucester, England, and Coventry Technical College of Coventry, England, have jointly developed a computer-integrated manufacturing (CIM) system in which CADKEY 3™ is linked with MAPICS II™, a manufacturing, accounting, and production information control system developed by IBM. "ECSL-CADKEY and Coventry Technical College are providing a CIM system that has high functionality using low-cost hardware and software," said Keith Jones, Head of New Technology at the college. "The CIM solution is targeted specifically at small and

medium-sized companies that wish to make small initial investments on systems that will develop as the company itself develops."

CADL™ (CADKEY Advanced Design Language) provides the seamless link between CADKEY 3 and MAPICS II. After a designer has created and dimensioned the geometry of his three-dimensional part in CADKEY 3, he/she presses a designated Function Key, and the menu changes to commands and prompts for creating MAPICS-related data: Item Masters, Bills of Material, Routings, etc. The MAPICS menu and prompts look like the CADKEY menu and prompts.

The CIM project developed by ECSL-CADKEY and Coventry Technical College, and implemented at the college, involves a product that is a complicated assembly of 20 parts. Each of the 20 parts is itself an individual product designed and manufactured by first-year undergraduate students. Each individual part becomes a member of a family of parts. And, each part goes through the processes of order entry, design (including finite-element analysis), production of machine data, creation of data for production planning and control, ordering of material, manufacture, shop-floor documentation, and invoicing.

"CIM is a business strategy, rather than an automation or computer strategy," Keith said. "Its aim is the success of the company as a business entity rather than an improvement in function or functions." CIM requires the integration of all related functions: Business Planning, Research and Development, Manufacturing Resources and Capacity Planning, Sales, Marketing, Finance, Accounts and Administration.

"The aims of the CIM project," Keith added, "are to provide a realistic training environment for integrated manufacture, to gain expertise in the design and implementation of integrated systems, to produce a working model to enable empirical measurements of the effects on productivity, and to produce saleable products." To carry out this project, the college formed an Advanced Manufacturing Technology Team comprised of specialists in engineering, management and administration. Their ultimate goal is the development of a Computer-Integrated Enterprise, encompassing **all** business functions.

ECSL-CADKEY and Coventry Technical College currently implement their CIM system using an IBM System 36™ (5360) minicomputer as the host for a local area network (LAN) of IBM-compatible personal computers and peripherals. The software environment has two operating systems, DOS and XENIX. DOS supports CADKEY 3, desktop publishing, and utilities. XENIX supports multi-tasking operations and utilities. Both operating systems support finite-element analysis and numerical control.

For additional information about this CIM solution, contact Keith Jones, Coventry Technical College, Coventry CV1 3GD, United Kingdom, 44-20-325-7221 (FAX: 44-20-352-0164), or Steve Taylor, ECSL-CADKEY, Unit 6, Stonehouse Industrial Estate, Oldends Lane, Stonehouse, Gloucester GL10 3RQ, United Kingdom, 44-45-382-8084 (FAX: 44-45-382-8622).

CADL CORNER

2DXFORM and 3DXFORM: Two Very Useful Utilities

Among the programs on the diskette of CADL utilities that accompanies CADKEY 3, 2dxform.cdl and 3dxform.cdl are particularly useful.

2dxform

2dxform.cdl performs a transformation (copy) that combines the translation and rotation of one or more entities in x and y coordinates. The program prompts you to enter a base point and an orientation of the entities. It then prompts you to indicate a new position for the base point and a new orientation. It is not possible to tilt entities using 2dxform.

How to use: FILES - CADL - EXECUTE, enter: 2dxform

You can specify the level on which you want the new geometry to be created. The program displays a menu allowing you to select entities individually (SINGLE) or in groups (CHAIN or WINDOW).

Choose the desired option, and select the entities to be translated and rotated into a new x,y position. Indicate the entity's old base point and old main direction point (orientation). Indicate the new base point and the new main direction point into which the entity is to be copied.

After the entity has been copied into its new x,y position, you can continue to place it into other new positions by specifying other new base points and new orientations. To stop the program and return to the CADL menu, press ESC or F10.

Before leaving 2dxform, the program asks you if you want to

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Mapping Application Using CADL and CADKEY 3

CADKEY Dealer *Keeps On Truckin'* in Taipei

Computek, Inc. of Taipei, Taiwan, R.O.C. uses CADL™ (CADKEY Advanced Design Language) as a link in its Geographical Information System to create 3-D topographical maps from aerial or ground photographs, including U.S. satellite and spot satellite photographs.

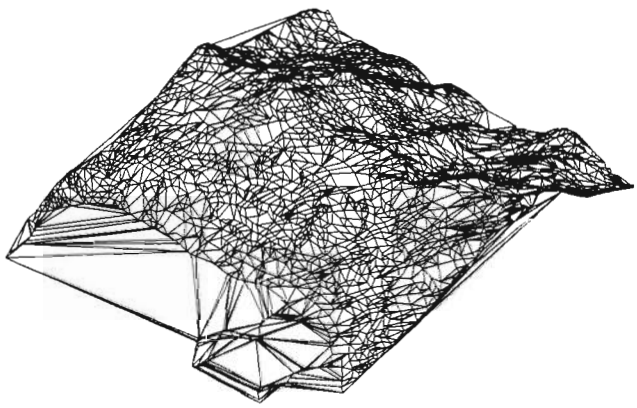
Computek's Geographical Information System works with video cameras and scanners, IBM-compatible personal computers, and an analytical stereoplotter, such as MPS-2 or ASP-2000. The video camera creates digital raster data from a photographic image of geographical terrain, for example, Yang Ming Mountain on Taiwan. The scanner creates the same type of data from line-drawn terrain maps. Computek's GIS software converts the raster data into vector data. Height data (z-coordinate values) are stored with the two-dimensional data at this point.

Computek's software uses a scanning instrument to generate a digital stereo model (image) of the vector data for anaglyph stereoscopic viewing. The software computes and records the x, y and z coordinates for any point where a reference mark is located in the stereo model. The digital geographical information is now three-dimensional. The x-y-z data are then transferred and stored in a CADL file as 3-D lines.

Three-dimensional terrain data, especially related to mountains, must take account of contour, slope, and aspect (triangular hill side). These data elements are particularly important for civil engineering and for soil and water conservation. Computek's GIS software produces contour (CTR), slope (SLP), and triangular hill side (THS) data and adds them to the CADL file.

The user can display this CADL file as a topographical map in CADKEY 3™. He/she can also use CADKEY 3 to modify the map. For example, a civil engineer can perform "what if" experiments to determine the best route and design for a road in mountainous terrain before blasting any rock or moving any earth. The engineer can also estimate rather accurately how much rock or earth must be removed to construct the road, right down to how many truckloads will be required to remove the dirt!

For additional information about Computek's Geographical Information System, contact Peggy Young, Computek, Inc., P.O. Box 39-1120, Taipei, Taiwan. From outside of Taiwan, telephone: 886-2-721-2203; FAX: 886-2-752-3359.



Three-dimensional Digital Terrain Model created by Computek.

CADL CORNER continued

(Continued from page 5.)

delete the original entities that you selected.

3dxform

3dxform.cdl performs a transformation (copy) that combines the translation and rotation of one or more entities in x, y and z coordinates. The program prompts you to enter a base point and a primary and secondary orientation of the entities. It then prompts you to indicate a new position for the base point and new primary and secondary orientations. It is possible to tilt entities using 3dxform.

How to use: FILES - CADL - EXECUTE, enter: 3dxform

You can specify the level on which you want the new geometry to be created. The program displays a menu allowing you to select entities individually (SINGLE) or in groups (CHAIN or WINDOW). Choose the desired option and select the entities to be translated and rotated into a new x,y,z position.

Indicate the entity's old base point, old main direction point (primary orientation), and old secondary direction point (secondary orientation). Indicate the entity's new base point, new main direction point, and new secondary direction point.

After the entity has been copied into its new x,y,z position, you can continue to place it into other new positions by specifying other new base points, new primary orientations, and new secondary orientations. To stop the program and return to the CADL menu, press ESC or F10.

Before leaving 3dxform, the program asks you if you want to delete the original entity or set of entities that you selected.

Sico Meets Its Maker!

Sico (see-co), the six-foot robot celebrity of movies and TV, charmed everyone during his visit to CADKEY's World Headquarters on June 6, 1989, "to meet my maker." (Sico portrays himself as a pleasantly macho male robot.) Robert Doornick, President of International Robotics, Inc. of New York, who designed Sico using CADKEY 3™, accompanied his creation.

Sico inspects news photographer Patrick Flynn's camera. Robert Doornick of International Robotics stands in the background, left. Photograph courtesy of Manchester Herald, Manchester, Connecticut.

"My father is a forklift," Sico quipped, "and my mother is an escalator...I'm engaged to a trash compactor in New Jersey...I've got a crush on her." Following Peter Smith, co-founder of CADKEY, whom he addressed as "Great Master," Sico toured CADKEY's headquarters talking with all the children and adults that he met along the way. He danced with people, gave rides, and played a little soccer with the children. Sico noted that he and Warren Mack, a member of CADKEY's Training Department, must have the same barber. When he met Steve Mastrangelo, CADKEY's Technical Director, Sico asked, "Should I call you God?"

"People immediately feel comfortable around Sico," Robert Doornick said. "Adults lose their inhibitions and become like children because there is no protocol for talking to a robot." Sico's efforts "to pass himself off as human" not only entertain people, but they also allow Sico to make significant contributions in the areas of rehabilitative therapy for young and old, and in education and business, as well. "Sico and his family of robots can be unendingly patient and compassionate with people," Robert Doornick added.

International Robotics, Inc. has committed itself to scientific research dedicated to the evolution of intelligent robots to serve human needs, especially the needs of the elderly and handicapped. As a way to fund the company's research, International Robotics has created a Communications Robot division for the entertainment industries and for the world of corporate business. International Robotics makes 12 different models of robots, all designed using CADKEY 3.

Sico moves his head, arms, and wheels in response to signals that Robert Doornick generates by manipulating the keys on a wallet-sized, micro-processor-based control unit in his pocket. Each row of keys is of a slightly different size or shape that Doornick's fingers read in braille-like fashion. Doornick supplies Sico's voice, in any of seven languages, through a tiny microphone concealed in the palm of his hand. Robert Doornick could be called a "high tech ventriloquist." Equipped with optical and vocal feedback systems, the robot can be controlled from a distance of up to one-half mile. "The distance is not the important thing," Doornick said, "it is the life-like motion and interaction with people." Doornick said that it takes six months to train an actor to perform with this kind of robot.

Sico has appeared with Sylvester Stallone in *ROCKY IV*, and with James Brown in his concert at Radio City Music Hall. Sico has also appeared at Walt Disney's E.P.C.O.T. Center where CADKEY's Bill Noble first encountered him. He has appeared on a variety of television programs including talk shows, situation comedies, soap operas, and specials. Sico is the only robot that can boast of being a member of the Screen Actors' Guild, and that has a personalized American Express Platinum card for purchasing his own airline tickets.

Sico's most frequent occupation is that of corporate "spokesperson" for more than 80 companies in widely different businesses. Sico serves in training, advertising, sales promotion, and high-tech marketing. "At a trade show, Sico becomes the center of the entire event," Doornick said. However, whenever Sico is *on location* for an extended period of time, he always visits children at local hospitals.

On his way out the door, Sico noticed Cheryl Smith, who is expecting a baby, and said, "It's going to be a boy." We'll see....

CADKEY Welcomes DataCAD Users' Groups!

DataCAD Users' Groups are scheduling activities that we want you to know about. The groups are listed by states with the name of at least one contact person. Some users' groups have formal names; others do not. Members frequently host meetings at different locations. The address listed with the contact person's name is not necessarily the meeting place. If your DataCAD Users' Group is not included in this listing, please let us know.

State	Location/Contact	Meetings
Calif.	Orange County Area Jean-Paul Jean Bassenian/Lagoni Architects 2031 Orchard Dr. Santa Ana Heights, CA 92707 (714) 553-9100	Meetings: Monthly.
	Sacramento Area Bill Edgington 2110 Enterprise Blvd. W. Sacramento, CA 95691	
	San Diego Area Gary Brooke La Jolla CAD 7721 Herschel Av. La Jolla, CA 92037 (619) 456-2325	Meetings: Monthly.
	San Fernando Chapter/ A.I.A. Los Angeles Area DataCAD Users' Group Beverly Bolin 14951 Califa St. Van Nuys, CA 91411 (818) 781-7108	Meetings: Monthly.
Conn.	Central Connecticut Area Tracy Powell Micro Engineering Solutions 470 Murdock Av. Meriden, CT 06450 (203) 630-3630	Meetings: Monthly.
	Stamford Area (Fairfield County, CT, Westchester County, NY.) David Chilenskas Entre Computer Center 777 Summer St. Stamford, CT 06901 (203) 967-2233	Meetings: Monthly.
Ga.	Greater Atlanta Area John Gorman Gorman & Associates 20 Perimeter Park, #109 Atlanta, GA 30341 (404) 455-6367	
Ill.	Chicago Area Julie. L. Keverian Hancock & Hancock 230 N. Michigan Av., #205 Chicago, IL 60601 (312) 346-7155	Meetings: Monthly.
Mass.	DBUG DataCAD Boston Users' Group Evan Shu Evan Shu Architects 10 Thatcher St., #515 Boston, MA 02113 (617) 720-6035 or Rick Gleason The Gleason Partnership 114 Commonwealth Av. Boston, MA 02116 (617) 267-7754	Meetings: Monthly.
Md.	Maryland-D.C. Area Mark Dowjat CADD Group, Inc. 12104 Heritage Park Circle Silver Springs, MD 20906 (301) 942-5801	Meetings: Monthly.
Mich.	MUD Michigan Users of DataCAD (Lansing and Central Tri-County Area) James A. Remus Granger Construction Co. P.O. Box 22187 Lansing, MI 48909 (517) 393-1670	Meetings: Monthly.
Minn.	Minnesota Area (All of Minnesota, parts of Wisconsin and Iowa) Steve Rick Entre Computer Center Northwest Center, #150 55 East 5th St. St. Paul, MN 55101 (612) 222-6200	Meetings: Bi-monthly.

State	Location/Contact	Meetings
Mo.	Central States (Missouri, Eastern Kansas, Southern Illinois) Nicholas Peckham or Mike Goldschmidt Peckham & Wright Architects 18 North Eighth St. Columbia, MO 65201 (314) 449-2683	Meetings: Monthly.
N.C.	Charlotte Area Brian Turner ADEP Architects Outlet Square, #721 Charlotte, NC 3204 (704) 375-6038	
	RADIUS Raleigh Area DataCAD Information & User Support Mark Dickey P.O. Box 12253 Raleigh, NC 27605-2253	Meetings: Quarterly.
N.J.	DUNE DataCAD Users of the Northeast (Bergen County, N.J., Rockland County, N.Y., Manhattan & Brooklyn, N.Y.) Allen Weitzman The Ives Group 14-25 Plaza Rd. Fair Lawn, NJ 07410 (201) 791-7444	Meetings: Monthly.
Tenn.	MAD Memphis Area DataCAD Users Dick Eades Eades Association of Architects 6807 Amersham Memphis, TN 38119 (901) 756-5596	Meetings Monthly.
Texas	Dallas-Fort Worth Area Jim Fay Urban Architecture 7001 Preston Rd., #210 Dallas, TX 75205 (214) 522-8494 or Rick Ferrara Richard Ferrara Architects 445 East Walnut St., #131 Richardson, TX 75081	Meetings: Monthly.
Va.	Central Virginia Area Roger O'Dell John Fornaro, A.I.A. 414 East Market St. Charlottesville, VA 22901 (804) 296-5432	Meetings: Monthly.
	Tidewater Area (Southeastern metropolitan Virginia) Tim Pruitt I.V. Harris & Associates, Inc. 329 Office Square Lane, #200 Virginia Beach, VA 23462 (804) 499-8628	Meetings: Monthly.

Changes in CADKEY Users' Groups

State	Location/Contact	Meetings
Calif.	Electro Optical Industries, Inc. 859 Ward Drive Santa Barbara, CA Ernie Liu (805) 964-6701, x133 T.J. Twombley (805) 238-1121	Meetings: Quarterly. Serving: San Luis Obispo, Santa Barbara & Ventura Counties.
Texas	DFW CADKEY Users' Group (formerly General Instruments) P.O. Box 153882 Irving, TX 75015 John Henderson (214) 438-7691, x242	Meetings: Bi-monthly. Serving: Greater Dallas and Fort Worth areas.

Welcome to Newest CADKEY Users' Groups!

State	Location/Contact	Meetings
Mich.	CAD CAM, Inc. 11887 Belden Court Livonia, MI 48150 Cecil Lewis or Karl Limburg (313) 425-8494	Meeting: 1st meeting Sept. 7. Serving: Detroit Metro area.
Minn.	Anoka-Ramsey Community College 11200 Mississippi Blvd. Coon Rapid, MN 55433 George Heron (612) 427-2600	Meetings: 1st Wed. in November, January, March, and May. Serving: Upper Mid-West.

TRADE SHOW UPDATE

See CADKEY at the following trade shows in 1989:

COMTEC '89, Sept. 7-10, World Trade Centre, Hall 3, Singapore, CADKEY, INC. and Manufacturing Information Technology, Ltd.

Federal Computer Conference, Oct. 23-25, Washington Convention Center, Washington, DC, Booth #2718.

AUTOFACT, Oct. 31 - Nov. 2, Cobo Conference/ Exhibition Center, Detroit, MI, Booth #2300.

COMDEX / FALL '89, Nov. 13-18, Las Vegas Convention Center, Las Vegas, NV, Booth #W0148.

MTAG/IMIP, Nov. 27 to Dec. 1, Washington Hilton, Washington, D.C.

Call Danielle Provencio, Trade Show Manager, for the availability of discounted admission tickets one month before the show.

Dealers Present CADKEY 3 at Specialized / Regional Trade Shows

SME APEX SHOW, Sept. 12-14, Grand Center, Grand Rapids, MI, Booth #305, CIM Solutions.

NCGA C4 (CAD, CAE, CAM, CIM), Sept. 13-15, Santa Clara Convention Center, Santa Clara, CA, Booth #2-6-208, Poelman's Design Service.

Rochester Machine Tool Show, Sept. 13-15, Riverside Convention Center, Rochester, NY, CNC Systems.

Rochester Computer and Business Show, Sept. 19-21, Riverside Convention Center, Rochester, NY, Booth #131-133, QMC Technologies, Inc.

SME APEX SHOW, Sept. 26-28, Sabin Cincinnati Convention Center, Cincinnati, OH.

Central Ohio Industrial Product Exhibition, Sept. 27-28, Ohio Center, Columbus, OH, Booth #206.

SME APEX SHOW, Oct. 3-5, Infomart, Dallas, TX, Booth #307, MLC CAD Systems.

FABTECH INTERNATIONAL, Oct. 9-12, Chicago O'Hare Exposition Center, Chicago, IL, Booth #1038, Anderson-O'Brien Associates.

Buffalo Computer and Business Show, Oct. 10-12, Buffalo Convention Center, Buffalo, NY, Booth #255-257, QMC Technologies, Inc.

SME APEX SHOW, Oct. 10-12, St. Paul Civic Center, St. Paul, MN, Booth #321, Anderson-O'Brien Associates.

Computer and Office Automation Expo, Oct. 11-12, Astrohall, Houston, TX, MLC CAD Systems.

INcast GOLD RUSH '89, Oct. 15-18, Los Angeles Airport Marriott Hotel (LAX), Los Angeles, CA, A & M Systems.

SME Tool Expo '89, Oct. 18, John Q. Hammons Trade Center, Holiday Inn, Joplin, MO, CAMTEC.

Tennessee Industrial Show, Nov. 14-15, Chattanooga Convention Center, Chattanooga, TN.

Build Boston '89, Nov. 15-17, Bayside Exposition Center, Boston, MA, CADDVision.

Dayton Industrial Exhibition, Dec. 5-7 Dayton Convention Center, Dayton, OH.

TRAINING SCHEDULE AT CADKEY

We have Training dates scheduled through November 1989. Please call Lisa Varvelli in the Product Support Department to register (203) 647-0220, FAX: (203) 646-7120.

Course	Sept.	Oct.	Nov.
Introduction to CADKEY	25-27	9-11	6-8
Advanced Geometric Modeling	7-8	12-13	9-10
Introduction to CADL	18-20	31-2	
CADKEY Solids	21-22	16-17	20-21

CADKEY Dealer Invited To Participate In GOLD RUSH '89

The Investment Casting Institute has invited A & M Systems, a CADKEY dealer in Newbury Park, California, to present a technical paper at ***INcast*** **GOLD RUSH '89**, the Institute's 37th Annual Technical Meeting and Mini Expo, to take place at the Los Angeles Airport Marriott Hotel (LAX), Los Angeles, CA, October 15-18, 1989.

A & M Systems will speak about using CADKEY 3 for part design, prototypes, mold making, and gating set-ups in the investment casting process. Investment casting is a high-tech, low-cost, metal

part manufacturing method.

A & M Systems played a supporting role to their customer, Schrey & Sons Mold Company of Chatsworth, California, in the design and manufacture of the largest single-shot investment mold ever built. (See **3-D WORLD**, July/August 1989, pp. 3-5.)

For information about ***INcast* GOLD RUSH '89**, call the Investment Casting Institute, Dallas, TX, (214) 368-8896.

THIRD-PARTY NEWS

H.J.Caddy™ Sends CADKEY and DataCAD Files by FAX!

Inset Systems of Brookfield, Connecticut, introduces H.J.Caddy™, a software package that offers CADKEY and DataCAD users greater flexibility in the input and output of graphical and textual data. H.J.Caddy's ability to convert CADKEY and DataCAD files into the format used for FAX transmission is its most outstanding output feature.

H.J.Caddy can work with CADKEY or DataCAD plot files in HPGL format, or with CADKEY part files and DataCAD drawing files translated into DXF format, to perform its conversion into FAX format. H.J.Caddy can output CADKEY or DataCAD files ranging in size from A (8.5"x11") through E (34"x44"). For files larger than size A, H.J.Caddy sends its output in tiles (image segments), complete with crop marks to assist the recipient in reassembling the entire image. H.J.Caddy essentially transforms the FAX machine into a remote large-format plotter.

For additional information, contact Inset Systems, Inc., 71 Commerce Drive, Brookfield, CT 06804, (203) 775-5866, FAX: (203) 775-5634.

CADKEY/DataCAD Training In U.S. & Canada

Many authorized CADKEY and DataCAD Training Centers have scheduled courses in addition to the training available at CADKEY's world headquarters here in Manchester, CT. The following is a list of who is doing what, where and when:

State	CTC	Location/Contact	Course	Dates
Ala.	Auburn University	O.D. Smith Hall Auburn, AL Bret Smith (205) 844-2372	*Intro. to CADKEY*	Sept.13-15
	Jacksonville State University	Jacksonville, AL Dr. P.S. Yeh (205) 231-5781, 5229	*Intro. to CADKEY*	Dec. 11-13
Calif.	CAD Micro-Systems	11936 W. Jefferson Blvd. Culver City, CA Monica Hunter (213) 391-7226	*Intro. to CADKEY* *Advanced CADKEY* *CADKEY SOLIDS*	Sept. 6-8 Oct 11-13 Nov. 15-17 Dec. 5-7 Sept.20-21 Nov. 1-2 Dec 13-14 Oct. 19 Nov. 28
	CR CADD	560 West First St. Tustin, CA Carol Beuhrens (714) 544-7223	*Basic DataCAD* *Macros* *Advanced DataCAD* *DC Modeler*	Sept. 6,8, 13, 15 Sept.12,14 19, 21 Oct. 10, 12 17, 19 Oct. 18, 20 25, 27 Oct. 11 Sept. 26 Oct. 24 Sept. 28 Oct. 26
	Evergreen Valley College	3095 Yerba Buena Rd. San Jose, CA Loren Fromm (408) 274-7900	*Intro. to CADKEY*	Sept.8-9 Sept. 15 Oct. 20-21 Oct. 28 Jan. 8-10 Apr. 9-11
	Golden West College	15744 Golden West St. Huntington Beach, CA John North (714) 895-8209	*Intro. to CADKEY*	Sept.27-29 Nov. 17-19
	Harais Company	63 Marin Valleyt Dr. Novato, CA Jim Harais (415) 382-8254	*Basic DataCAD*	Oct. 16-19
	Poelman's Design Service	901 Campisi Way, #360 Campbell, CA Mike Poelman (408) 377-3585	*Intro. to CADKEY* *CADL* *CADKEY SOLIDS*	Sept.11-15 Dec. 5-9 Nov. 6-10 Oct. 2-4

CADKEY/DataCAD Training In U.S. & Canada (continued)

State	CTC	Location/Contact	Course	Dates
Colo.	University of Colorado at Denver	1200 Larimer St. Denver, CO Andreas Vlahinos (303) 556-2370	*Intro. to CADKEY*	Aug. 14-16
Conn.	Computer Training Institute TCBC	856 Main St. Manchester, CT Lars Marshall (203) 649-3724	*Intro. to CADKEY*	Sept.25-27
	Entre Computer Center	777 Summer St. Stamford, CT Dave Chilenskas (203) 967-2233	*Basic DataCAD*	Sept. 19-21
	Waterbury State Technical College	750 Chase Parkway Waterbury, CT Stephen Colwell (203) 575-8084	*Intro. to CADKEY*	Sept.26-28
D.C.	University of D.C.	4200 Connecticut Av. NW Washington, DC Harold Goldstein (202) 282-7349	*Intro. to CADKEY*	Dec. 18-20
	Republic Research Training Center	1911 N. Ft. Myer Dr. Arlington, VA Gregg Kendrick (703) 525-9014 (800) 476-4454	*DataCAD I* *DataCAD II* *DC Modeler* *DCAL*	Schedule made on request.
Fla.	Gateway Computers	10901 Roosevelt Blvd. St. Petersburg, FL Bryan Dreibelbis (813) 576-0549	*Intro. to CADKEY* *Advanced CADKEY* *CADKEY SOLIDS*	Sept. 20-22 Oct 9-11 Oct. 18-19 Scheduled on request.
Ill.	Triton College, Employee Development Institute	2000 Fifth Av. River Grove, IL Peggy Hosty (312) 456-0300, x539	*Intro. to CADKEY*	Sat.: Sept. 9-30 Oct. 7-28 Fri.: Oct. 20 to Nov. 17 Wed.: Nov. 22 to Dec. 20
La.	Louisiana Technical University	Ruston, LA Robert Kelso (318) 257-3056	*Intro. to CADKEY*	Nov. 20-22
Mass.	Springfield Technical Comm. College	1 Armory Square Springfield, MA William White (413) 781-7822	*Intro. to CADKEY*	Oct. 10-26 (Tue./Thu. evenings) Jan 10-12
	Worcester Polytechnic Institute	100 Institute Rd. Worcester, MA Pat Scavone (508) 831-5633	*Intro. to CADKEY* *Intro. to CADL*	Oct. 19-20 Oct. 23

CADKEY Participates in ConnSENSE '89

by Beth Morgan

CADKEY's Educational Programs Dept. demonstrated CADKEY 3 operating completely by voice control at **ConnSENSE '89** at the University of Connecticut in Storrs, July 11-14, 1989. ConnSENSE, an acronym for Connecticut's Special Education Network for Software Evaluation, has become the premier conference in the Northeastern United States focused on how technology can assist disabled individuals.

Using Command Corp's BUG Voice Command System which associates spoken sounds with CADKEY menu commands, CADKEY 3 demonstrated 100% accuracy of response to voice input. The system does not even require perfect pronunciation on the part of the user. As long as the voice-recognition system has associated a distinct sound from a user with a CADKEY menu command or prompt, CADKEY 3 and BUG will execute the instruction when the user makes the sound. This means that even people with speech impediments can use CADKEY 3 and BUG productively.

CADKEY's Educational Programs Dept. has been working with United Cerebral Palsy to set up training facilities in Weed, California, where disabled individuals can learn CADKEY as part of a program to develop marketable skills. Using a mouse with a CAD system requires little physical dexterity on the part of a user, although there is still some keyboard interaction. Voice-controlled input reduces the need for manual dexterity even more. Training in CAD offers the potential of new employment opportunities for disabled people.

"There is an existing need in American industry for all kinds of people with technical skills,

including CAD," said Jimm Meloy, Director of Educational Programs. "Disabled individuals can benefit from CAD."

For additional information about how CADKEY 3 and the BUG Voice Command System can assist the disabled, contact CADKEY, INC., Educational Programs, (203) 647-0220.

Impressive Performance!

IBM Participates in Connecticut Users' Group Meeting

The Connecticut CADKEY Users' Group featured a comparative demonstration of a prototype of IBM's state-of-the-art Model 70-A21™ with 486/25 MHz power platform and IBM's current product, the Model 70-A21, 386/25 MHz with 80387 math co-processor. The demonstration of comparative performance in a mathematically intensive application took place during the group's meeting on August 9, 1989, at CADKEY World Headquarters in Manchester, CT. Bill Kohn of Micro Engineering Solutions, Meriden, CT and Dennis Wainright of IBM, Boca Raton, FL made the presentation.

The demonstration clearly supported IBM's claim that the i486™ outperforms its 386 machine for math-intensive business, engineering, and scientific applications. The i486 was very significantly faster than the 386 at performing exactly the same operations. The demonstration created a very positive impression among the members of the users' group.

The members also participated in demonstrations of CADKEY 3™ (Version 3.5), DRAFTPAK™, CADDInspector™, and DataCAD™ with lots of down-to-earth questions.

CADKEY/DataCAD Training In U.S. & Canada (continued)

State	CTC	Location/Contact	Course	Dates
Mich.	CIM Solutions	1970 Briarfield Canton, MI Linda Jastrzebski (313) 397-2486	*Intro. to CADKEY* *Advanced CADKEY*	Sept. 12-14 Oct. 10-12 Nov. 14-16 Sept. 7-8 Oct. 26-27 Dec. 6-7
	Future Solutions	35455 Schoolcraft Livonia, MI Paul Zwarka (313) 591-3030	*Intro. to CADKEY* Advanced CADKEY	Sept. 12-14 Oct. 10-12 Nov. 14-16 Sept. 7-8 Oct. 26-27 Dec. 6-7
Minn.	Anderson-O'Brien	2575 N. Fairview Av. St. Paul, MN Gail Lenzmeier (612) 636-2869	*Intro. to CADKEY* day & eve.	Sept. 18-22 Oct. 16-20 Nov. 6-10 Dec. 4-8
	Albert Lea Technical Institute	2200 Tech Dr. Albert Lea, MN Larry Gilderhus (507) 373-0656	Intro. to CADKEY Advanced CADKEY	Sept. 26 to Oct. 24 (Tue./Thu.) Nov. 4, 11, 18 (Sat.)
	Anoka Ramsey Comm. College	11200 Mississippi Blvd. Coon Rapids, MN George Heron (612) 427-2600	*Intro. to CADKEY* *Advanced CADKEY*	Evening classes scheduled on request.
	Northeast Metro Technical College	3300 Century Av. White Bear Lake, MN Jeffrey Jahnke (612) 770-2351, x323	*Intro. to CADKEY* *Advanced CADKEY*	Oct. 5-7 Feb. 19-21 Nov. 9-11
	St. Paul Technical Institute	235 Marshall Av. St. Paul, MN Michael Haffner (612) 221-1307	*Intro. to CADKEY*	Call for schedule
Mo.	St. Charles County Comm. College	2726 Droste Rd. St. Charles, MO Daisy Vulvocich-Carp (314) 946-0089	*Intro. to CAD with CADKEY*	Mon. eve. Sept. 18 to Nov. 20
	Country Computer	810 East Marshall St. Charleston, MO Bill McNeary (314) 683-3383	*Basic DataCAD*	Oct. 25-27 Dec. 13-15
	University of Missouri at Rolla	Rolla, MO Terry Lehnhoff*CADKEY* (314) 341-4632	*Intro. to* Nov. 16-17	Sept. 14-15
Mont.	Montana Tech	West Park Street Butte, MT Dick Johnson (406) 496-4452	*Intro. to CADKEY*	Nov. 1-3
N.C.	Rockingham Comm. College	P.O. Box 38 Wentworth, NC Jim Puntnam (919) 342-4261	*Intro. to CADKEY*	Oct. 25-27 Feb. 7-9 Mar. 21-23 May 2-4

CADKEY/DataCAD Training In U.S. & Canada (continued)

State	CTC	Location/Contact	Course	Dates
N.C.	Wake Technical Comm. College	9101 Fayetteville Rd. Raleigh, NC Brian Matthews (919) 772-0551, x172	*Intro. to DataCAD* (11-week evening courses)	Starting Sept. 11, Fall, Winter Spring, Summer.
N.J.	Glassboro State College	Glassboro, NJ John Humbert (609) 863-6203	*Intro. to CADKEY*	Sept. 25-27 Nov. 6-8 Feb. 12-14 Apr. 23-25
N.Y.	Onondaga Comm. College	Onondaga Hill Campus Syracuse, NY Paul Rice (315) 469-7741, x520	*Intro. to CADKEY*	Nov. - Dec. evenings Jan. 8-10 days Apr. - May evenings.
	Rochester Institute of Technology	1 Lomb Memorial Dr. Rochester, NY Bob Heffner (716) 475-2205	*Intro. to CADKEY* *Advanced CADKEY*	Sept.18-19 Nov. 6-7 Sept.20-21 Nov. 8-9
Ohio	Kent State University, Trumbull Campus	4314 Mahoning Av. NW Warren, OH Ray Chambers (216) 847-0571	*Intro. to CADKEY*	Aug. 29 to Dec. 9 Tue./Thu. Sept. 18 to Oct. 11 Mon./Wed.
	Progressive Computing Company	P.O. Box 770176 Cleveland, OH (216) 228-3850	*Intro. to CADKEY* *Advanced CADKEY* *CADL*	Sept. 20-21 Sept. 6-7 Oct. 3-5
Okla.	Oklahoma State University	502 Engineering North Stillwater, OK George Collington Gerald McClain (405) 744-5709	*Advanced CADKEY*	Oct. 2-3
Ore.	CTR Business Systems	825 SW 14th Av. Portland, OR Matthew Van Dyke (503) 227-2414	*Intro. to CADKEY* *Advanced CADKEY*	Sept. 13 Nov. 8 Dec. 6 Sept. 20 Oct. 25 Nov. 22 Dec. 20
		Other courses: *Conceptual Design, CADKEY SOLIDS, CADL*		Scheduled on request.
Pa.	Lafayette College	Easton, Pa. J.V. Poplawski (215) 250-5400	*Intro. to CADKEY*	Oct. 9-11 Nov. 7-9
	Wilkes College	Stark Learning Center Wilkes-Barre, PA Michael Petyak (717) 824-4657	*Intro. to CADKEY*	Sept.12-14 Oct. 9-11 Nov. 14-16 Jan. 9-11

THIRD-PARTY NEWS

Expert Mold Designer™ Enhances Plastic Injection Mold Design

Cornerstone Technology, Inc. of Windsor, Ontario, Canada, has introduced Expert Mold Designer™, a computer program specifically developed to enhance the accuracy, quality, and productivity of CAD-generated plastic-injection mold designs. Integrated with CADKEY 3™ and CADKEY/UX™ through CADL™ (CADKEY Advanced Design Language), Expert Mold Designer functions as a transparent extension of CADKEY from a user's point of view.

In a CADKEY-like menu, the Expert Mold Designer prompts the user for standard title-block information such as: customer, part name and number, etc. The program then prompts the user to select mold parameters, such as: mold width and length, plate thicknesses, rail height, "O" diameter, and spherical radius. The program displays all the parameters for verification prior to execution.

Expert Mold Designer generates four separate complete drawings, two mold sections, and two plan views. All sections show the components properly drawn with clearances and with all the numbered balloons for the components. The finished drawings include completed title blocks and bills of material with DME catalogue numbers. It determines the weight of the mold and the required sizes for eyebolt holes. In addition, standard mold-base components can be easily added or deleted with no trimming of lines required.

For additional information contact Cornerstone Technology, Inc., 5225 Burke Street, Windsor, Ontario N9A 6J3, Canada, (519) 737-1970, or (519) 977-8850.

IGES PARSER/VERIFIER™: Tool for Debugging, Q.C., CALS Conformance

The IGES PARSER/VERIFIERtm developed by IGES Data Analysis, Inc. of Berkeley, Illinois, could be ranked as an industry standard for checking an IGES file's conformance to the IGES specification. The software can distinguish among IGES Versions 1 through 4, and checks for conformance to a specified version. It also has a CALS Conformance Option.

The PARSER/VERIFIER performs a rigorous check on the syntax, structure and semantics of an IGES file, and produces detailed reports containing file statistics, warnings and error messages. It checks every entity in the file, as well as the directory section, status flags, pointers and parameter data. All graphic entities are checked for precision and general mathematical correctness. The PARSER/VERIFIER reports detailed information referring to the location of an offending entity and a self-explanatory warning or error message. Related messages are grouped together. All errors are reported with detailed references into the original file.

Major CAD/CAM vendors use the PARSER/VERIFIER as a tool for debugging their IGES translators and as a tool for quality control. Many firms that do a significant amount of their work exchanging data through IGES files use it to check the quality of incoming or outgoing IGES data files. "We use it here," said Ken Erman, CADKEY's Director of Technical Services, "and it saves us hours debugging IGES files."

For additional information, contact IGES Data Analysis, Inc., 5670 McDermott Drive, Berkeley, IL, (312) 449-3430, FAX: (312) 449-3451.

CADKEY/DataCAD Training In U.S. & Canada (continued)

State	CTC	Location/Contact	Course	Date
S.D.	Northern State College	Box 705 Aberdeen, SD Jerry Sauer (605) 622-2571	*Intro. to CADKEY*	Nov. 17-18 Feb. 16-17 May 28-29
Texas	MLC CAD Systems	5316 Highway 290 West Austin, TX Pat Stutz (512) 892-6311	*Intro. & Advanced CADKEY* Classes in Dallas & Houston	Sept. 27-29 Oct. 25-27 Nov 29 to Dec 1 Dec. 20-22 Scheduled to meet needs.
	Texas Tech University	P.O. Box 4200 Lubbock, TX Nancy Turner (806) 742-3451	*Intro. to CADKEY*	Jan. 9-11 Mar. 20-22 May 15-17 Aug. 21-23
Utah	Salt Lake Comm. College	4600 S. Redwood Rd. Salt Lake City, UT Gary Poulsen (801) 967-4303	*Intro. to CADKEY*	Sept. 18-20 Oct17 to Nov. 16 (Tue./Thu. 2-4:30p.m.) Dec. 13-15
Va.	Republic Research Training Center	855 West Main St. Charlottesville, VA Gregg Kendrick (804) 296-9747 (800) 476-4454	*DataCAD I* *DataCAD II* *DC Modeler* *DCAL*	Schedule made on request.
Wash.	Walla Walla College	204 S. College Av. College Place, WA Robert Noel (509) ,527-2082	*Intro. to CADKEY*	Sept. 12-14 Mar. 19-21
Wis.	North Central Technical College	1000 Campus Dr. Wausau, WI Michael Clark (715) 675-3331	*Intro. to CADKEY*	Dec. 27-29 May 29-31
Wyo.	University of Wyoming	3085 Engineering Bldg. P.O. Box 3295 Laramie WY 82071-3295 Donald Polson (307) 766-6450	*Intro. to CADKEY*	Jan. 10-12 May 23-25

CADKEY / DataCAD Contest Coming!!
More Information in November/December
3-D WORLD
Watch For It!

PIK-FAST™ Offers Free "VIEW VISUALIZERS"

Jenson Properties, maker of the PIK-FAST™ overlay for CADKEY 3, offers a free copy of their unique "VIEW VISUALIZER" to Cadkey users on request. Designed as a compact car, the device provides instant recognition of CADKEY's 8 standard views. Contact Jenson Properties, Inc., P.O. Box 470368, Tulsa, OK 74147, (918) 627-5770, FAX: (918) 663-4939.

LONGNAME™ and LEVELOG™ Now on the Scene

LONGNAME

LONGNAME™ from Geri Engineering, Inc., of San Carlos, California, allows users of CADKEY 3™ (Version 3.5) to give their part filenames up to 15 characters long.

Once loaded, LONGNAME creates and uses two subdirectories. LONGNAME is menu driven and can be called from a macro that is bound to a keyboard key or to a digitizer-tablet position. A pop-up menu displays the choices: SAVE, LOAD, LIST/LD, VERIFY, DELETE, and SETUP.

When the user saves a CADKEY part file, the software prompts for a drawing name which may contain up to 15 characters. The first four characters of the drawing name serve as a key filename for the look-up table where the drawing name and the CADKEY part filename are stored. The CADKEY part file is then stored in the normal manner in CADKEY's part (\PRT) subdirectory.

A user can load a drawing by entering the 15-character drawing name or by using the LST/LD feature which uses the CRT screen to display first the key filenames, and then the drawing names in a selected key file. The user selects the file directly from the screen. If the file is stored on the system, CADKEY 3 loads the file.

LEVELOG

LEVELOG , also from Geri Engineering, records as a separate file the names that are assigned to levels in a CADKEY part file, and links them to the part file by its part filename. In this way, the part file does not become burdened with additional information in the data base that would cause a slow down in the execution of the AUTOSCALE and REDRAW commands.

While this program is a companion to the LONGNAME program, it functions either with or without it. If CADKEY 3 is being used with LONGNAME, LEVELOG displays the 15-character drawing name rather than the 8-character part filename. LEVELOG is also menu driven, and invoked from a macro bound to a keyboard key or to a digitizer-tablet position.

For recording, LEVELOG requests the level number to log; it defaults to the currently active level. The user can assign any level 1 through 256. LEVELOG also requests the name that is to be assigned to the selected level number. As with LONGNAME, this level name can include up to 15 characters.

To find a level, LEVELOG prompts the user to specify either the level's number or name. With either selection, if the search is successful, it displays the level's number and name on the prompt line.

The user can have LEVELOG display the list of level numbers and their associated names on the screen or in printed form.

LONGNAME and LEVELOG each sell for $79.95. For additional information, contact Geri Engineering, Inc., P.O. Box 1121, San Carlos, CA, (415) 594-0102.

CADKEY/DataCAD Training In U.S. & Canada (continued)

CANADA

Prov.	CTC	Location/Contact	Course	Dates
New-foundland	Memorial University	St. John's, Newfoundland John Allen (709) 737-7473	*Intro. to CADKEY* *Advanced CADKEY*	Sept.28-30 Nov.30 to Dec. 2
Nova Scotia	J.L. Ilsley High School	38 Sylvia Av. Halifax, N.S. Preston Allen (902) 421-6650	*Intro. to CADKEY*	Oct. 25&27 Sept.11 to Dec. 15 evenings
Ontario	C.A.T.E. Ryerson Polytechnical Institute	350 Victoria St. Toronto, Ontario Brian Whelpton (416) 979-5106	Intro. to CADKEY	Nov. 9-10 Feb. 15-16 Apr. 26-27

CADKEY Training in Australia

State	CTC	Location/Contact	Course	Dates
New South Wales	Advanced Manu-facturing Technologies	1 Boundary Rd. Northmead, NSW Alistair McLachlan 02-683-4033	*Intro. to CADKEY* *Advanced CADKEY*	Sept. 5-8 Oct. 3-6 Nov. 7-10 Dec. 5-8 Sept.12-14 Oct. 10-12 Nov. 14-16 Dec. 12-14

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