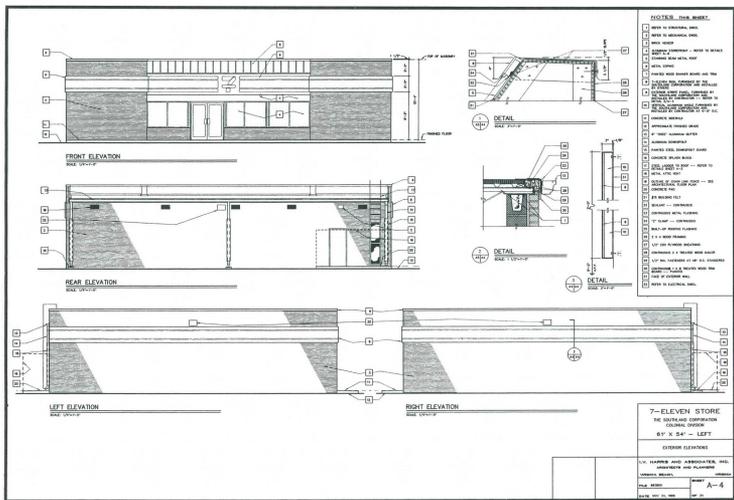


Perspectives



DataCAD Profile:

I. V. Harris and Associates

The firm's entry into computer-aided drafting was initiated to enhance plan reuse, save time, and offer our clients timely response to their specific needs. These applications seemed to comprise a higher percentage of our total CAD production, yet as time goes on and our operators gain proficiency, we are realizing many more capabilities of DataCAD.

One of our first projects chosen for CAD implementation was a 7-Eleven Convenience Store. Developing left- and right-hand versions of the store was accomplished by simply copying files and mirroring them to obtain the opposite-hand set of drawings. Not only did the computer provide a more attractive set of drawings than previous manual methods, it made owner-requested changes easier and faster. We have also interfaced our DataCAD

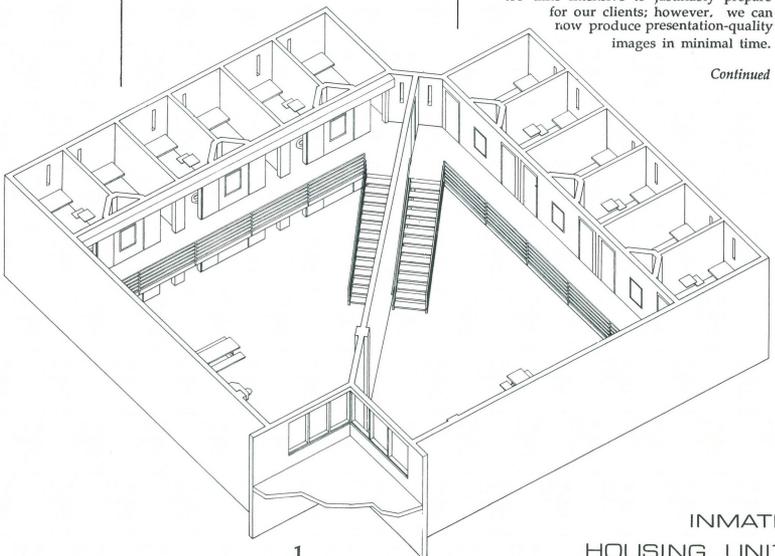
system with other brands of software used by some of our Consulting Engineers thereby allowing our client to derive significant benefits from CAD.

Another time-saving application of our CAD system has been on projects where frequent alterations occur or which require different options such as office systems layouts. With partition and office furnishing templates, we have been able to lay out standard office modules and copy them into varying configurations. This flexibility has enabled us to meet client needs efficiently while keeping record of the systems inventory of numbers and types of equipment utilized.

We are continually developing a library of standard details from which our Architects are able to select and/or modify rather than generating new details from scratch. The CAD system is proving very productive for such repetitive detailing.

Prior to our incorporation of DataCAD, three-dimensional drawings were sometimes too time intensive to justifiably prepare for our clients; however, we can now produce presentation-quality images in minimal time.

Continued



\$1 Million Worth of Computer Software Awarded to 56 Schools of Architecture

The American Institute of Architecture Students (AIAS) and Microstructure Corporation, the developers of DataCAD computer aided design software, are pleased to announce the results of their first round of educational grants. Schools of architecture at 56 universities nationwide have been awarded \$1,000,000 worth of computer software for use in computer laboratories. The software grants will assist schools in educating students in technological advances in design-related computer applications.

The initiation of the educational grants program stemmed from student concern that the United States is losing both its competitive posture in the service industry and its technological and productive leadership in a global economy. AIAS President, Kent Davidson, stated, "We are seeking broad-based support among a coalition of A/E/C professionals, educators, and business leaders at all levels. We are challenging them to join forces to increase America's productivity in the service industry."

Additional software grants will be awarded during the fall semester of 1988, and schools are encouraged to reapply for additional grants.

To be placed on the mailing list to receive more information on the AIAS/Microstructure Educational Grants Program, contact Carl Costello at (202) 626-7472.

Spring 1988 Grant Awards

Arizona State University
University of Arkansas
Ball State University
Cal Poly/Pomona
Cal Poly/San Luis Obispo
Catholic University of America
City College of New York
University of Detroit
Drury College
Florida A&M University
University of Florida
Georgia Inst. Of Technology
Hampton University
University of Houston
University of Illinois/Chicago
University of Illinois/Urbana
Iowa State University
Kansas State University
University of Kansas
Lawrence Inst. of Technology
Louisiana State University
Missouri Community College
Milwaukee School of Engineering
University of Minnesota
Mississippi State University
Murray State University
NYIT/Old Westbury
University of New Mexico
Oklahoma State University
University of Oklahoma
University of Oregon
Pacific Union College
University of Pennsylvania
Pitt Community College
Rensselaer Polytechnic
Ryerson Polytechnical
Southern Illinois University
State Univ. of New York/Alfred
State Univ. of New York/Delhi
University of S. Florida
Southern College of Technology
Spring Garden College
Temple University
Texas A&M University
Texas Tech University
Tulane University
Tuksgeue University
University of Utah
Valencia Community College
Washington State University
Wentworth Inst. of Technology
Wisconsin/Milwaukee
Woodbury University
Yale University

Microstructure Introduces DataMERGE an Integrated Planning Tool

Microstructure has been working, in cooperation with a West German software house, on a non-graphic database package designed specifically for the AEC industry. The first trials on the European market surpassed all our expectations—the package became the best selling industry program within a year. It has generated a lot of interest at the Chicago AEC and the New York AIA shows and it is now available for sale. We know that you, the users, will share our enthusiasm for DataMERGE!

DataMERGE is the first program to be written for the PC that combines all the elements of design and construction in one database. It has a direct link to DataCAD and can extract quantity information from DataCAD drawings without time consuming exchange files. Combining the quantities with the DataMERGE materials database enables the automatic creation of cost estimates and specifications. But that's not all DataMERGE can do! The main features include:

- Changes to the drawing are reflected in changes in the specifications and cost estimates. Automatically.
- Tabulation and comparison of up to 99 bids on each item with automatic calculation of average and ideal bids.
- Tracking of as-built costs and quantities. Final costs can be used to update the materials database.
- Area function and usable area calculations.
- Custom text database, using AIA, CSI or in-house specifications as a source.
- Linked to SpecWriter, the specification editing package from Pinkerton/Galewsky that was designed for ease and speed of use.
- Reports can be generated in many different formats.

What can DataMERGE do for you?

If you are an architect, engineer, or design professional and have been surprised by a cost estimate that was higher than you expected (and who hasn't?), then DataMERGE will help you keep your design within budget. If you have ever had a client who was unhappy with the materials specified and wanted them changed (and who hasn't), DataMERGE will help you recalculate the costs. Knowing the cost as soon as the drawings are completed, and immediately after any changes are made, will save you time and money and make you more competitive.

If you are a design/build company, DataMERGE will integrate your work from the original design drawings all the way to completion of construction. No more time consuming and inaccurate re-entry of data!

If you ever needed a quantity take-off from a DataCAD drawing, if you ever needed to show cost or descriptive information for a drawing, then DataMERGE will not only make your work less time-consuming, it will also improve your accuracy.

The DataMERGE package, including SpecWriter, costs \$3,495.00 and it is available now. Ask your DataCAD dealer for a demonstration, or call Microstructure (804) 295-2600 for more information. □

DataCAD-Velocity Where shading ends... rendering begins

DataCAD-Velocity—the first photo realistic, high resolution, 3D solids rendering system for assigning real world surface attributes to all 3D wireframe drawings created within DataCAD's DC Modeler.

Now all DataCAD users, whether they are architects, engineers or construction professionals, can explore the realm of high-end solids rendering...within the familiar DataCAD menu structure.

Unlike many systems that only utilize flat shading, DataCAD-Velocity offers surfaces like plastics, metals and glass, which can actually display varying degrees of transparency. Textures such as wood, marble, brick and shingles are "mapped" onto the model's surface to achieve a new degree of realism for high-impact presentations.

DataCAD-Velocity

- Is photo realistic. Offers a palette of 16.7 million surface color choices in 24 bit resolution.
- Select real world materials such as plastics, metals, alloys—all with smooth shading, smooth edges and surface highlights.
- Offers real world surface textures such as wood, brick, marble, stone and shingles for high-impact presentations.
- Realistic glass... defines the degree of transparency to get smoked, clear or tinted glass.
- Multiple lighting environments, user-defined.
- Direct output to the Hewlett Packard Paint Jet Printer and Calcomp 5835 Plotter. Also allows direct output of photorealistic slides, transparencies, and colorprints at 4,000 line resolution.

SHADING PROGRAMS

- Is not photo realistic. Limited to 256 color choices, in 8 bit color resolution
- Simple, flat colors.
- Most use "hatch" patterns for limited texturing.
- No transparency.
- Multiple, directional lights.
- Limited output. None are photo-realistic.

Specifications: Supports a variety of IBM PCs and compatibles, utilizing an Artist 10, Verticom H256, VMI, VGA, or Velocity 16-bit video digitizing board. See your authorized DataCAD dealer for further details. Suggested retail price: \$2,000.00. □

WindowIn on DataCAD

The Newsletter for DataCAD Users

WindowIn on DataCAD® provides insight into the use of DataCAD commands, recommendations for managing your DataCAD facility and a forum through which users may share information. Timely information is provided on the use of new DataCAD releases, as well as other software with which DataCAD interfaces.

Over 150 pages of information in a format not readily available elsewhere will be received during the course of your subscription; this making *WindowIn on DataCAD* a valuable addition to the *DataCAD Reference Manual* as well as any training or support programs. Areas of interest can be reviewed in your own environment as the need dictates or as time permits. An *Annual Index* will cross-reference commands and

their uses; thus providing easy access to information published.

The subjects will be addressed in such a manner as to provide information for all levels of users (from beginning to advanced). Through increased knowledge and efficiency in the use of DataCAD, reduced drawing times should be realized. A savings of only a few hours over the course of a year will recover the subscription fee.

WindowIn on DataCAD provides a cost-effective approach to your continued learning of DataCAD, to learning from the experience of others, and for keeping abreast of technical developments. To receive 12 issues plus the *Annual Index*, send a check for \$72.00 in U.S. funds (\$85.00 if outside of U.S.A.) made payable to *WindowIn on DataCAD*.

WindowIn on DataCAD Post Office Box 502, Middlebury, VT 05753 (802) 388-7981

(DataCAD is a Trademark of Microstructure Corp.)

Perspectives

Save Layer/Load Layer

We have occasionally received calls from some of our users who report having an error message appear when using DataCAD. It may be "Internal diagnostic error 10" or something similar. Sometimes the machine might seem to freeze and the only way out is to reboot. Under some circumstances the error may be caused by insufficient disk space, or memory if the virtual file resides in a RAM disk. Occasionally it is because the drawing file has become "corrupted."

If strange symptoms begin to occur in a particular drawing (inability to move, copy or erase entities or problems loading symbols) then that drawing may be "corrupted." If you suspect that a drawing is "corrupted" then you should attempt to save the layers to layer files. If you are unable to save one of the layers, then try moving groups of entities from that layer to a blank layer. In this way you may be able to isolate one particular entity or symbol that is causing the problem. Once you have saved all of the layers, then exit that drawing and create a new drawing.

After you have entered the new drawing and have the correct number of layers turned on, then you can load the layer files into the new drawing. Set the first layer active and choose LoadLayer from the menu. Pick the layer file from the menu that you want to load and answer yes to the prompt, "Do you want to delete the the active layer?". Now set the second layer active and repeat the process until you have loaded all the layers into the new drawing. This series of actions can correct most problems associated with drawing files. It is also good practice to keep the size of your drawing files down.

As you repeatedly edit a drawing file it only continues to get bigger. Some operations "free-up" space within a drawing file that was previously allocated (erasing entities, purging symbols, erasing and deleting layers, deleting a view, deleting a selection set) but they do not make the drawing file any smaller. This can only be accomplished by going through the process of saving layers to layer files and then loading them into a new drawing file.

Experimenting With DataCAD User-Definable Linetypes

by Gary Wheeler, Modesto, CA

This is a discussion for all you "hackers" who like to experiment on the company computers after business hours. It will discuss a quick way to draw cross-hatching for narrow areas such a brick veneer. As this method creates a new Linetype called "Veneer" we will also show how you can create or edit Linetypes used in DataCAD. Additional examples will also be shown.

As shown in Appendix D of the DataCAD Manual, there are twenty-four Linetypes which can be used with the program. These range from the common Solid Line, and Dashed Line, to the rather baroque "Insul" Line which snakes back and forth in a pattern twice as wide as it's spacing. Twenty of these Linetypes can be user-defined or created by you. About the only limitations are that the pattern can not be made up of more than twenty visible or invisible solid line segments, and the name can not have more than eight characters.

These Linetypes are redefined by editing a file called DCAD.LIN, located among the DataCAD program files. As mentioned in Appendix D, you can edit this file with EDLIN, the Microsoft line editor. To do this you would typically type EDLIN C: DCAD.LIN from MSDOS. You would then List, Insert, Delete, change specified line numbers, and then End.

See the EDLIN chapter in the MSDOS Manual for commands and syntax. If you are not familiar with EDLIN, you can successfully edit DCAD.LIN with most word processors in a non-document mode.

Below is a portion of DCAD.LIN:

```
0-24.142 _____
*PropLine _____
8.0
0.75 Describes the
0-5 pattern for
0.5 "PropLine"
0-5
0.5
0.5 _____
*Insul _____
0.1667
-118.0362 47.3592
```

In the above case, an asterisk notes the beginning of a Linetype, and is immediately followed by the name. Note the asterisk may be confusing if using EDLIN, as EDLIN also notes the line being edited with an asterisk. The line immediately following the name is the default spacing in feet. In the case of "PropLine" the line pattern normally repeats itself every 8.0 feet. The next lines each represent the line segment direction in normal cartesian degrees, and the relative length as a percentage of the line spacing. A minus symbol between the degrees and distance means that this line segment is not visible. In the next line of our example, the line segment is zero degrees for 75%. The next line is an invisible line at zero degrees for 5%. By deciphering this "code" you can see the overall Property Line line is actually made up of one long dash followed by two shorter ones. The last line segment is a invisible one and in this case is not noted.

You cannot damage the DataCAD program or drawing files by messing with DCAD.LIN. Any changes are temporary. For instance, you could mess with the fourth user-definable Linetype "PropLine" by changing it's name, space between dashes or something. Then any time you load a file and look at it, all lines corresponding to the old PropLine, will seem to be changed in the same way. It's handy to keep backups of the Linetype file under another name, such as LINETYPE.NEW etc. To get the Linetypes back the way they were originally, you can always put the original program diskette that has DCAD.LIN on it in drive A:, and type COPY A:DCAD.LIN.

To minimize drafting room disruptions, change commonly used Linetypes only slightly if at all. Attempt to make revised Linetypes similar in size and shape to the original whenever possible. The most uncommon Linetypes such as Lap Siding Left, Shiplap, and Rigid Insulation (depending on the type of work your office does) are the best candidates for total revision. There should be agreement between CAD Operators on what changes should be made and how they will work. After debugging, all work stations should be changed at the same time to be consistent.

Below are three new Linetypes designed for architectural work. The first, "Veneer" replaces Rigid Insulation, and was created as a quick way to cross-hatch the brick veneer shown on floor plans. It can also be used to cross-hatch handicapped parking areas and shade special areas for emphasis. The width of the cross-hatching matches the user-definable line spacing exactly. A five-inch line spacing will exactly fill a 5" brick veneer area with 45 degree cross-hatching. Five-foot spacing can be used for Handicapped access ways. Originally, this Linetype was to be a series of "zees" (ZZZZZZ) which would show both the sides of the veneer and the shading. Unfortunately it proved difficult to make good corners and the sidelines had to be eliminated (/////////).

Corners may still need some special tricks or hand work to touch up, but it's easier than using the HATCH command on these narrow areas. A quick way to use it is to trace the outside face of wall studs (on another layer) counter-clockwise.

The second new Linetype is "Earth," which can replace Shiplap. It is useful for showing a few quick lines of shading under Cross Sections to represent earth. One line is drawn below another, offset such that the up-down and left-right hatch marks alternate. The recommended spacing depends on the scale of the drawing, and is best learned from experience. The third Linetype is "Fence" which should replace "Box." This recommended spacing is 8 or 16 feet. This is made up of long dashes each followed by a small "x" and is useful to represent fencing on site plans. It closely follows the shape of the original Box line.

	*Veneer	*Fence
	0.4167	8.0
	0-100	0 65.858
	255 141.4212	0-10
	45 -141.4212	270 -7.071
		45 20
		180 -14.14
		315 20
		90 -7.071
		0-10
	*Earth	
	0.45	270 45
	270 -15	0-15
	180 45	90 45
	270 -15	0-15
	0.45	270 45
	270 -15	0-15
	180 45	90 45
	0-50	
	90 45	
	0-15	

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Please include \$5.00 postage for each order.
Calif. residents add sales tax.
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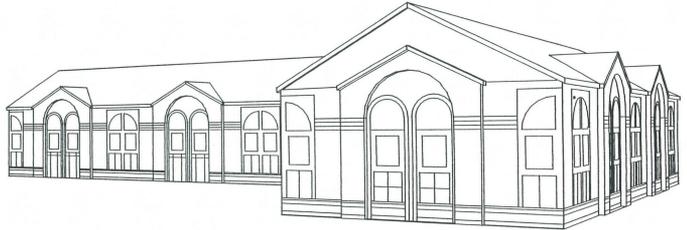
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714-240-6811



ALBERT DATTOLI
ARCHITECT

SERHAT AKISKA, ASSOCIATE
CADD MANAGER

75 NORTH MAPLE AVENUE
RIDGWOOD • NEW JERSEY • 07451
201-447-3808



MOORE/WEINRICH ARCHITECTS
14 MAINE ST. SUITE 401 BRUNSWICK, MAINE 04011
207-729-1636

Firm History

1973-1977
Steven Moore/John Weinrich Architects
Rumford Point, Maine
3-6 person

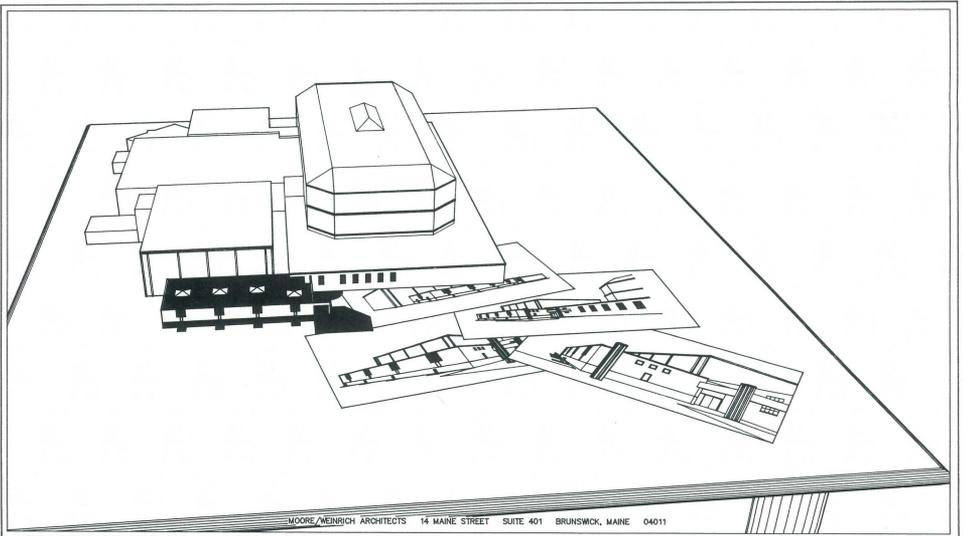
1977-1982
Steven Moore/John Weinrich Architects
Brunswick, Maine
8-10 personnel

1982-1988
Moore/Weinrich & Woodward Architects
Brunswick, Maine
14-16 personnel
(D. M. Woodward retired from the firm 1986)

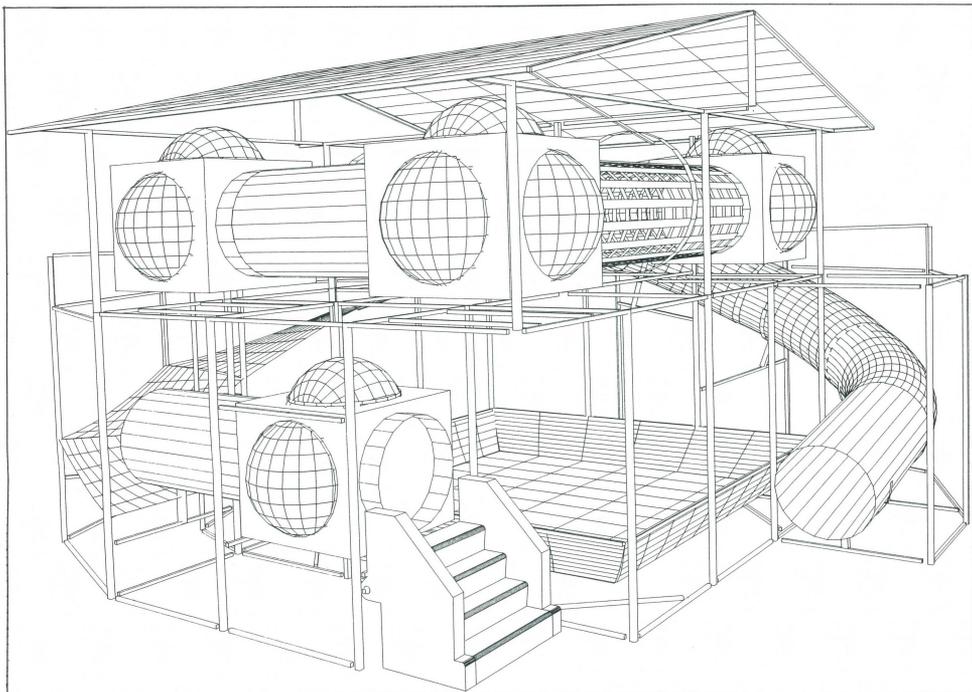
1988-Present
Moore/Weinrich Architects
Brunswick, Maine
19-20 personnel

Moore/Weinrich Architects have shown a slow but steady growth over the past fifteen years since the establishment of Steven Moore/John Weinrich Architects in Rumford Point, Maine.

A combination of the unique capabilities of the two principals and a strong support staff of professionals has created a nationally recognized design oriented firm which offers their clients an increased depth of service.



MOORE/WEINRICH ARCHITECTS 14 MAINE STREET SUITE 401 BRUNSWICK, MAINE 04011



■ **Soft Play, Inc.**
2625 North Tryon St.
Charlotte, NC
28206

Soft Play, Inc., designs, develops and manufactures children's playground equipment. But this equipment differs from the monkey bars, merry-go-rounds and swings of bygone days.

"For 20 to 30 years, playground equipment remained virtually unchanged, with hard materials, sharp edges and a lot of injuries. The rise in liability insurance and insurance claims about five or six years ago changed all that," said Grant M. Strawcutter, vice president and design director of Soft Play.

"Restaurants and family entertainment centers which catered to children were faced with a clear choice: remove the equipment or find a safer alternative," he said. This proved especially important to companies which had

clearcut marketing strategies geared to the young urban professional with children.

Strawcutter's solution to this problem was a freestanding playunit manufactured of soft materials, with no moving or mechanical parts. After witnessing the success of the design on a limited scale, in 1984, Strawcutter and Neal A. Crites, currently president of the corporation, formed Soft Play, Inc.

Quality materials, innovative design and an attention to detail have proven to be a winning combination for the Soft Play team. The privately-held company employs more than 25 and projects revenue gains of at least 150 percent for 1988. □

Learn DataCAD From The People Who Wrote The Book....

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3. Authorized Training Center for DataCAD

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SCHEDULE (Cross Section)

1. 2D-CAD MODULES
2. INTERIOR (Columns, Furnishings)
3. EXTERIOR (Outdoor, Plants)
4. LANDSCAPE - A (Active)
5. PEOPLE - P (Groups)
6. PEOPLE - G (Groups, Beds)
7. ROOFERS (Cars, Trucks, Buses)
8. ROOFERS (Cars, Trucks, Buses)
9. ALL PATTERNS
10. ALL PATTERNS

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Organic CADD

* Each Module Includes 50-100 Symbols *

Changes from DataCAD 3.5 to 3.6

- Entity selection routines, (Entity, Group, Area), in the editing functions of DataCAD and DC-Modeler have been combined. This allows the use of "Fence" in the DataCAD, and the use of "SelSets" in DC-Modeler.
- The memory management of Templates has been completely rewritten. By doing this, we have been able to dramatically decrease the loading time of templates into DataCAD. Also, this has the effect of not increasing drawing file size until a symbol is actually placed into the drawing.
- DataCAD's hatching algorithms have been redesigned. This causes Hatch to work correctly if the pattern is rotated and/or if the hatch origin is relocated.
- The new entity Polyline has been added. These can be created in the Curves menu.
- EditSets menu has been further enhanced to allow switching between Add To and Del From without having to reselect the set that is being acted upon.
- Line drawing speed for the cursor has been increased. This mainly affects our friends still using non-"AT Class" type computers.
- Text/Textfile has been enhanced to allow specification of the file extension to search for. This allows this function to operate just like the rest of DataCAD, where a file name is being asked for.
- The layers menu has been completely re-engineered with the following additional functions:
 - "All On" - This allows all layers to be turned on with one keypress.
- "ActvOnly" - By selecting this function, all layers are turned off except the one selected, which becomes the active layer.
- "DeLayer" - This command completely removes a layer from the drawing database.
- "ViewLayr" - Allows selecting a layer, in the current drawing, and displaying only it on the screen. This action is reversed when the screen is refreshed.
- "ViewFile" - This is similar to "ViewLayr," except that it displays a previously saved layer file.
- Template/SaveSymb/AuthPth has been added. When this toggle is on, symbols are saved into a sub-directory whose name is associated with the parent template file.
- Plotter drivers have been made external to the main program. This will have the net effect of increasing the number of plotters we support by allowing hardware manufacturers to write their own drivers for DataCAD.
- CopyDwg has been added back to the File I/O menu, due to popular demand. This command allows copying the current drawing in its current state to another file and/or another disk drive.
- Directry/SymFiles/PurgeSym has been added to allow purging unused symbols from your drawing without having to load a template file.
- Plotting has been totally re-engineered. This should alleviate the problems previously associated with plotting.
- The toggle DisSync has been added to the Settings menu. This new toggle, when on, causes DataCAD's distance readout to be synchronized with the current cursor rotation.

- The toggle DymnRot has been added to the main Template menu. This toggle allows symbol rotation to be specified dynamically upon insertion.
- Area/Perimeter calculations have been changed to allow adding or subtracting of perimeters and areas individually.
- Move/Drag/MaxLines has been changed so that when set to 0, the extents box is always used.
- Partial plotting may now be used if DataCAD is configured for only one COM port.
- The toggle ShwAtrs has been added to the Display menu. This controls the display of Visible Attributes that have been added through a DCAL macro.
- The variables in DXF Read/Write such as Scale, Auto/Interact are now remembered.
- DataCAD is no longer forced back into an orthographic projection when exiting the Modeler. The current projection is preserved until an editing function requiring 2D input is selected. At that time the view is automatically forced back to ortho.
- New Keyboard interrupts:
 - " (double quote key) has been added. This allows specifying a symbol to insert even if there is no template currently active.
 - Alt-9 restores the last Parallel projection.
 - Alt-0 restores the last orthographic projection.
 - Uppercase (Shift) V goes to the 3D view.
- The user interface of Move/Drag has been redesigned to increase its utility. After selecting the entities to move, the user is prompted to enter the point to drag from.

Continued

INTRODUCING: THE DETAILMASTER

FEATURES OF THE DETAILMASTER

The DETAILMASTER is COMPLETELY integrated with DataCAD™ and adheres to the familiar DataCAD user interface. Access to the DETAILMASTER is provided through the MACROS command in DataCAD.

The DETAILMASTER enables you to specify:

- The "plot scale" for a detail.
- The area of the drawing to be extracted as a detail, and
- The point defining the location of the detail drawing to be created.

Yes, it's as easy as 1, 2, 3. The DETAILMASTER will extract entities completely within the area AND CLIP the entities which cross the boundary. The DETAILMASTER will work with the Line, Arc, Circle, Ellipse, Text, Symbol (including nested symbols), Dimension, 3DLine and 3DArc entity types. Resulting details will be similar to that shown in the center. Of particular note, THE ORIGINAL TEXT SIZES AND DIMENSION VALUES ARE RETAINED DURING THE EXTRACTION PROCESS.

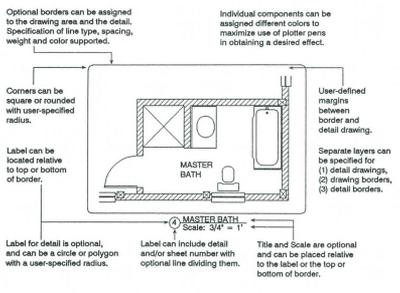
The DETAILMASTER provides the capability for you to specify that the entities are NOT to be enlarged during detail extraction. This permits you to perform additional work on the detail using the normal DataCAD commands and "real-world" measurements. The DETAILMASTER provides a separate "enlarge" function for subsequent scaling of details to the desired plot scale.

We know the value of time - So, instead of waiting for one detail after another to be extracted, why not "define" a number of them and then let the computer do what it is supposed to do - i.e. work for you! The DETAILMASTER allows you to define up to FIFTY details at one time, each with a user-specified plot scale. After defining the details, select BEGIN and make those pressing phone calls. The DETAILMASTER will process the details defined in a SHORT period of time.

The DETAILMASTER will automatically place labels identifying each detail; or, if you prefer, will allow you to manually place the labels.

DataCAD is a trademark of Microecture Corp.

C. L. Davis Consulting Associates will be releasing the DETAILMASTER in July. This product is the first in the PRODUCTIVITY SERIES under development by the company. The DETAILMASTER is aimed at increasing productivity in one of the more time-consuming efforts in design and drafting: The development of DETAILS.



CUSTOM LABELS BY THE DETAILMASTER

Every firm has their own style and method of drafting. The DETAILMASTER provides a complete system which allows you to specify YOUR OWN method of detail presentation. The notes surrounding the detail in the center indicate SOME of the major options available.

The DETAILMASTER allows you to specify X and Y offset distances and individual text sizes for various components defining the presentation of details. It has an option which allows these values to be defined using ACTUAL PLOT MEASUREMENTS, i.e. inches on the drawing paper. Why should you have to look up the "real-world" size for entering text, just so the computer can scale it to the size you wanted to enter in the first place? This feature also allows ONE set of values to be defined which will be valid for ALL plot scales. The DETAILMASTER also provides the ability to enter these values in "real-world" units.

The DETAILMASTER allows you to save YOUR method of detail presentation in a file much like a "default drawing" in DataCAD. You may define as many different styles as necessary, and load the appropriate file prior to defining the detail.

SPEED OF THE DETAILMASTER

The DETAILMASTER produced the detail shown in LESS THAN 90 SECONDS using a 16MHz 80386 microcomputer. The drawing from which the detail was extracted was approximately 270KB in size (2200 entities). This size is representative of larger drawing files in which a subset of the layers will be used in extracting details. PERFORMANCE INCREASES WITH MULTIPLE DETAILS. Ten details were extracted from the same drawing in LESS than 8 minutes - that is LESS THAN 1 MINUTE PER DETAIL. (NOTE: Timing will vary depending upon the specific hardware configuration and system maintenance practices.)

REQUIREMENTS FOR THE DETAILMASTER

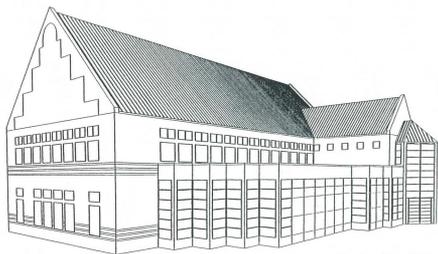
The DETAILMASTER is available for use with DataCAD-release 3.6 or later and requires no additional hardware. The DETAILMASTER requires approximately 150KB of disk space. Each copy of the DETAILMASTER will be serialized with your authorized DataCAD serial number.

TO ORDER THE DETAILMASTER

The DETAILMASTER will be available in mid-July 1988 at a cost of just \$249.95 per copy. For ordering information, contact your DataCAD dealer or us at the following address:

C. L. Davis Consulting Associates, Ltd.
P. O. Box 502 - Middlebury, VT 05753
(802) 388-7981

DEALER INQUIRIES INVITED



Chaska City Hall, Chaska, Minnesota.
Designed by John Weidt Associates, Chaska, Minnesota,
using the Andersen CADD-I program with DataCAD.

Andersen

The nation's largest window manufacturer — Andersen Corporation, Bayport, Minn. — has developed a DataCAD version of its computer aided design tool, the Andersen CADD-I program. CADD-I is available now for DataCAD.

The Andersen CADD-I program guides the architect in selecting virtually any of the manufacturer's window and patio door products. It adds them to computerized floor plans, elevations or detail drawings. All along, the Andersen CADD-I program keeps a running tally of the products selected — including design options and symbol codes. It prepares window schedules and data reports.

With DataCAD, the Andersen CADD-I package will come with two floppy disks, a user's manual, and access to a technical assistance "hot line". . . all this, free of charge, to qualified practitioners in the building industry. For more information, call Bob Saxler, AIA, Andersen's marketing technical services specialist, at (612) 770-7294.

DataCAD User Groups

Lansing Area DataCAD Users Group

Contact: James A. Remus, AIA
Granger Construction Company
6267 Aurelius Road
P. O. Box 22187
Lansing, MI 48909-2187
Phone: (517) 393-1670

Dcrunch Macro The Layer Manager

Features:

- Save all drawing layers automatically
- Load all saved layers automatically
- Merge drawings automatically
- Saves original drawing parameters too
- Decreases file size
- Reorganize order of layers

Created by:

CR * CADD
and Kevin Neubert

To Order:

Send \$95.00 to CR CADD
560 W. First St.
Tustin, Calif. 92680
(714) 544-7223
Custom macros available upon request

Expert DataCAD Training Now Available

Have you been looking for some help in learning DataCAD? We've got the answer! Microstructure is pleased to announce a new program to provide high-quality, comprehensive DataCAD training to our new and existing users: The DataCAD Authorized Training Center Program.

Each Authorized Training Center offers DataCAD courses specially developed by Microstructure to help both beginning and experienced users get more from their DataCAD software. A three-day Level 1 course is available now, designed for new users or those who would just like to brush-up on their DataCAD skills. An Advanced two-day Level 2 course which includes program customization will be available after July 1. Future courses will focus on the DC-Modeler, DataMERGE, and programming with DCAL.

The courses are designed to be taught "hands-on" meaning you'll have plenty of time to practice each new command you learn. Each student will receive a course workbook containing many useful features such as topic summaries, diagrams of DataCAD menus and keyboard shortcuts, strategic hints on when to use one command over another, and most importantly, step-by-step exercises that show you how to put what you've learned into practice. The workbook is yours to keep after the course, so you can continue to review your notes or practice the exercises again.

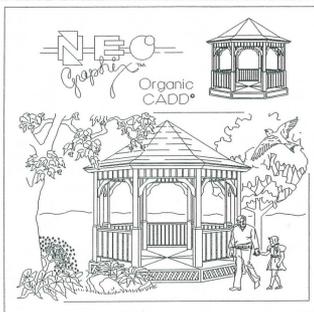
Each Authorized Training Center instructor has completed a rigorous training course at Microstructure, and has been provided with special instructional materials that will aid the instructor in clearly communicating strategies and concepts to you. Class size has been kept small, so you'll be able to ask plenty of questions.

We encourage you to take advantage of this educational opportunity. An investment in training your employees is money well spent. Often the highest cost in converting from manual drafting to CAD is neither the cost of hardware nor software, but the cost to you in lost productivity as your employees are trying to learn a new tool.

DataCAD reduces this loss in productivity by being easier to use than other CAD packages. But the fact remains that good training can cut your CAD learning curve in half, saving you weeks of "down-time" and thousands of dollars.

Right now there are twenty-six DataCAD Authorized Training Centers coast-to-coast, plus centers in Canada and Australia, with more on the way. The centers are listed below, so that you can find the one nearest you. We'll update this list periodically in Perspectives, and keep you abreast of new educational opportunities.

Continued



Third Party Software

NEO Graphix has released "Organic CADD," an extensive Template Line Art Library. Just as DataCAD is produced for Architects by Architects, Organic CADD is produced for DataCAD users—by users. The objective of NEO Graphix has been to provide a means to fully utilize the benefits of DataCAD to include, marketing proposals, client presentation and publication design. Organic CADD is the solution.

Organic CADD bridges the gap between computer and manual drafting, by transforming CADD drawings into simulated hand renderings. Like electronic "Rubber Stamps," simply compose your choice of rendered symbols around your CADD elevations or 3-D models, at any scale, rotation, or orientation. Clean-up of overlapping lines is automatic, via DataCAD hidden line removal.

Organic CADD is available in an introductory "Sampler" Collection, with inexpensive add-on Modules available. Add-on Modules are specialized and "type specific" symbol collections. For example, the Landscape Module allows the Landscape Architect to quickly and accurately render a proposed planting with the exact plants specified; the Interior Module allows the Interior Designer to render a room with the furnishing choices. The Fill Patterns Module offers an alternative to the calculation intensive, rigid geometry of Hatch Patterns, with random, free-form surface textures, such as uncoursed fieldstone. As a set, the Organic CADD Line Art Library is a powerful automated rendering tool.

Organic CADD also greatly expands the potential for using DataCAD as a Desk Top Publishing System. Combined with the many third party text fonts now available, Organic CADD may also be used as a "Clip Art" for in-house publications. The Borders Module, with a broad selection of Antique corners is ideal for this application.

Organic CADD affords the liberty to embellish otherwise sterile CADD drawings with an entourage of rendered elements, and is thus an important breakthrough toward the "Humanization" of CADD.

For more information contact:
NEO Graphix
P. O. Box 347
Earlsville, VA 22936
(804) 972-7090

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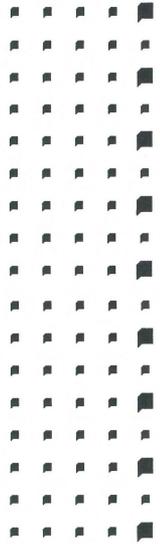
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Continued from p. 1

Even tracing over a DataCAD 3D wireframe image is much faster than trying to construct the same drawing manually. We have utilized the 3D system to illustrate a typical office work station; to clarify painting schemes; and for preparing presentation/display images.

Our initial desire for CAD was to provide for more efficient production of construction documents. DataCAD has surpassed our desires and expectations. We are now utilizing the system to assist in the design of projects and thereby opening new avenues into computer-assisted drafting and design. □

24. 3dArc has been moved from the Curves menu to the DCAD 3D/Entities menu.
25. The toggle SnglPen has been added to the Plotter menu. This allows more control over plotting by allowing the user to specify whether a single pen or multi-pen plotter is being used. By specifying a single pen plotter when doing a color plot, the plotter is paused, and the user is prompted to install the appropriate pen when pen changes are encountered.

Changes Affecting DataCAD 3D Only

1. The new entity type Surface of Revolution has been added. This is entered in the Modeler 3D Entity/Rev Surf menu, by specifying a profile (Polyline) and an axis of revolution.
2. The result of Hidden Line Removal/Savelmag and 3D views/Savelmag may now be directed to a layer file.
3. 3D GotoView now has the ability to turn layers on and off with saved views as in the 2D GotoView menu.
4. 3D Views/Perspective now allows specifying a fixed cone of vision OR the focal length of the "Camera Lens." □

Continued

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