



Reference Point

Volume 1, Number 1

Technical Resources for DataCAD®

July/August, 1991

Introduction:

We are pleased to present the premier issue of *Reference Point*, a new source of technical information for the DataCAD user. The publication will provide in-depth discussion of DataCAD. Much of the content of *Reference Point* will be technical in nature. However, the focus of the articles will be on *technique* rather than on an explanation of features on a menu-by-menu basis. The goal of *Reference Point* is to assist the user in maximizing his/her productivity in the use of DataCAD.

The accomplishment of complex drawing tasks requires the use of sequences of multiple commands, accessing many menu options. Control over the interplay of settings and selection methods across multiple menus is at the heart of *technique*. It is the source of significant efficiencies in DataCAD. Articles will necessarily elaborate upon "technical" aspects of DataCAD to explain the reasoning behind the use of particular menu options within the *technique* under consideration.

Reference Point will address the use of DataCAD, including the Modeler, Velocity, and Third-Party products. Where appropriate, discussion of hardware issues will be included in these pages.

Our intention is that users at all levels of experience with DataCAD will find timely and useful information in the articles presented here.

Some topic areas will be of special interest for those new to DataCAD, some to the more experienced user. The hope, though, is that all readers will find aspects of particular articles useful at some level, whether as a "refresher" for the old hand or as an indication of a future direction to follow for a new user. To assist the reader, the feature articles are rated on a "reference point" scale as indicated under the contents heading.

In addition to DataCAD *technique* articles, four regular features will appear in *Reference Point*: **Doing Windows**, **Tech Support**, **Points of Reference**, and **User Input**. Each is introduced under its own heading in this issue.

In this issue: the article entitled *Menu Blacking in DataCAD* describes a technique for "turning off" the menu bars and message areas of the DataCAD screen display for photographing images from the computer screen.

Cutting Doors in Curved Walls illustrates a methodology for accomplishing this difficult task. The article describes the use of many functions within a variety of menus. While the need to perform these specific functions may never arise for a particular user, many techniques described are applicable to other operations.

Confusing Words in DataCAD defines some terms that are often troublesome to the new user. **Orthomode**, **Ortho View**, **Reference Point**, **Snap Point**, and **Object Snap** may initially appear to have conflicting meanings or overlapping functions in the software. Each does have a distinct meaning and purpose. An understanding of them is fundamental to efficient working *techniques* in DataCAD.

The goal of *Reference Point* is a simple one: to provide information that will aid the reader in expanding his/her use of DataCAD. To meet this goal, the editorial content must be as responsive as possible to feedback from readers. Readers' input is critical to the success of *Reference Point*. You are encouraged to write c/o the address listed in the *Publication Information* section on page 8.

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<hr/>	
(no rating)	All Users
↘	New Users
↘ ↘	Intermediate Users
↘ ↘ ↘	Advanced Users



DOING WINDOWS

Microsoft Windows 3.0, released last year, is one of the most successful, and most debated, pieces of software of all time. Computer columnists have had a field day discussing its pros and cons, as have its users. For the DataCAD user, these discussions have been rather academic; DataCAD is not a Windows application. It may be made to run under Windows, but there are serious drawbacks (and very few advantages) to doing so.

CADKEY's announcement of the Parthenon Project makes the consideration of Windows an extremely serious matter for the user of DataCAD.

Upon release of the A/E/C product (hereafter referred to as Parthenon) resulting from the Parthenon Project, the DataCAD user will be faced with a choice between switching to it or continuing to use the 4.x product. As CADKEY will continue to support 4.x for the indefinite future, there will be a very real decision to be made by the user in the next year.

Doing Windows will be a regular feature of Reference Point; it will provide an introduction to the Windows environment for the purpose of informing the upcoming decision that DataCAD users face. Future articles will discuss specific aspects of the installation and operation of Windows; publications and other secondary resources will be referenced. In this issue, Windows 3.0 will be introduced in broad terms.

Microsoft, in its manual for Windows 3.0, describes it as:

...a graphical environment that introduces new, more streamlined ways for you to work with your personal computer.

It is important at the outset to distinguish between a "graphical environment" and a graphical user interface (GUI).

Much of the discussion around Windows has focussed on the relative merits of the GUI, whether it is more efficient than command line entry, whether it is really as good as the Mac GUI, etc. While this sort of debate is valid, it focuses on a relatively minor aspect of the "graphical environment." The really important

fact about Windows is not that the user selects commands by pushing a mouse around and pointing at icons, buttons, etc., but that Windows defines a total operational environment within which software applications are allowed access to much greater power than are applications running in the plain DOS environment.

Windows runs in three modes, depending on the hardware platform on which it is installed. For Real Mode, an 8086 or 8088 processor and 640K of conventional memory are required. For Standard Mode, an 80286 processor and a minimum of 1 megabyte of memory are required. For 386 Enhanced Mode, a 80386 or higher processor and 2 megabytes of memory are required.

CADKEY has not finalized the specs for Parthenon at this time, but the indication is that hardware capable of running 386 Enhanced Mode and a minimum of 4 megabytes of RAM would be a reasonable guess at its hardware requirements. For that reason, the discussions in Doing Windows will focus primarily upon Windows running in 386 Enhanced Mode.

Windows, in 386 Enhanced Mode, manages all memory allocation and enables multi-tasking (more than one application can be active at any given time).

Microsoft Windows also has a feature called Dynamic Data Exchange (DDE). It allows Windows applications to request and exchange data automatically. Today, a document can be created in Word for Windows, then be placed and formatted in Page Maker; when the original document is updated in Word, the changes automatically appear in Page Maker if the document was linked through DDE. The possibilities for A/E/C applications, with common databases shared by drafting (Parthenon), estimating (spreadsheet), and spec writing (word processing) applications are tremendous.

The source of this potential lies not in the GUI, but in the Windows "graphical environment" and the powerful "hooks" that it provides to fully implemented Windows applications.

Next issue, the process of unravelling the maze of Windows configuration files (akin to multiple CONFIG.SYS files) will begin.



Menu Blacking in DataCAD

When taking photographs of DataCAD images from the computer screen, it is desirable to extinguish the menu bars and message areas from the display. While these items cannot be turned off, they can be "blacked out."

Before changing the DataCAD configuration, save a copy of its current status. Go to the \MTEC directory and type:
COPY DCAD.CFG ORIGINAL.CFG

Load the appropriate graphics driver and type:
CONFIG

Select option 7, Screen Colors; select option 1, Set colors for menu and status text. Set all options to color 9, Dark Gray. Exit this menu by pressing ESC. At the main menu, select option 7, Screen Colors; select option 2, Adjust the DataCAD palette of colors. Verify that the color

defined as Dark Gray is very dark (with a 16 color graphics driver, values of 1,1,1 are good). Exit Config; save changes. At \MTEC, type:
COPY DCAD.CFG BLACK.CFG

Enter DataCAD; turn display grids off. Menu bars and message areas can be made visible by adjusting the contrast and brightness controls on the monitor. Once the correct view is chosen, make the active layer color Dark Gray. Adjust brightness and contrast to "black out" menus, and the screen may be photographed.

To return to the original configuration, in the \MTEC directory, type:
COPY ORIGINAL.CFG DCAD.CFG

The "black" configuration may be accessed at any time from the \MTEC directory by typing:
COPY BLACK.CFG DCAD.CFG

TECH SUPPORT

Tech Support will cover the topic of technical problems and limitations of DataCAD. The articles will be prepared in conjunction with the CADKEY tech support staff and reflect the current state of the software. In this issue, two subjects will be covered: communicating with CADKEY and defining software problems.

CADKEY can provide two types of DataCAD support. For "technical" problems, contact Mark Hyjek. For assistance with application questions, i.e. how to get DataCAD to do a particular operation, call Mark White. Mark White spends a lot of time on the road; if the question cannot wait, contact Mark Hyjek. Their phone extensions are listed at the right.

Defining Problem Areas:

It is important, to the user and the tech support staff, to distinguish between different types of problems that occur when running DataCAD.

First, the system configuration may be the source of problems. Settings in CONFIG.SYS, may be incorrect for DataCAD. Software drivers for graphics cards (independent of the DataCAD graphics drivers), memory management, networks, disk caching, and RAM disks, among others, may generate conflicts. Installation of TSR (Terminate and Stay Resident) programs may lead to conflicts, as well.

Second, DataCAD itself may have been installed or configured incorrectly. Changes made in DOS to the directory structure may not have been reflected in DataCAD's PathNames section.

Third, DataCAD may encounter problems with hardware configurations that are not fully "IBM compatible." There have been cases of problems resulting from idiosyncratic BIOS versions.

Fourth, a drawing file might be corrupted. The number of symptoms resulting from this type of problem is very large. They often show one of the DataCAD "fatal error" messages at the point of lock-up.

Fifth, DataCAD may contain a "bug." Typically, this type of problem is repeatable. A really pure "bug" would occur in all drawing files, on all systems, as a result of a particular sequence of commands. An example of a pure "bug" is the crash out of DataCAD that occurred in version 4.05 when an associative dimension was selected by Entity for erasure.

In future articles, the above types of problems will be discussed. Methods of identifying problems will be presented, as will techniques for avoiding and working around known "bugs" in DataCAD.

Tech Support Question of the Moment:

How does one install a Logitech Mouseman (serial version)?

Run MOUSE.COM (supplied by Logitech)

Select the Logitech Bus Mouse option in Config

CADKEY:
(203) 647-0220
Mark Hyjek: ext. 7209
Mark White: ext. 7130 (until August 16)

(203) 298-8888 (after August 16)



\\ Cutting Doors in Curved Walls

This article is presented, in part, to demonstrate a specific methodology for cutting doors in curved walls. More importantly, it illustrates the use of *techniques* in DataCAD that are applicable to a wide range of drawing tasks.

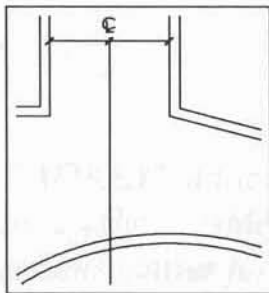


Figure 1

Figure 1 illustrates the starting conditions for this exercise. A curved wall (width 6") has been drawn; a 6'-0" corridor is opposite it. A 3'-0" door is to be placed in the curved wall, centered on the corridor (center line shown).

To begin the process, first verify that the Input Mode is *RELATIVE CARTESIAN*. Then move the two curved lines that form the wall and the corridor center line to a new layer named "work." In the **Obj Snap** menu (X), select *None* (S5) to cancel all object snap settings, then select *Center* (F5). Exit the **Obj Snap** menu.

Press ~ to enter a snapping point. At the prompt: "Please enter snapping point," snap to any position along either of the curved lines with the middle mouse button. A snapping point is placed at the center point of the curved wall lines. Exit *snap point* by pressing the right mouse button.

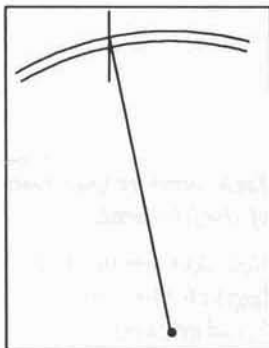


Figure 2

Enter the **Obj Snap** menu (X), select *Center* (F5) to turn it off, and select *End* (F2) and *Intsect* (F7). Exit the **Obj Snap** menu. Draw a line from the center of the arc to the (intended) center point of the door to be placed. Do this by snapping first to the snap point inserted in the previous step and then to the intersection point of the "center" line and the upper (outer) wall line. Figure 2 illustrates the result.

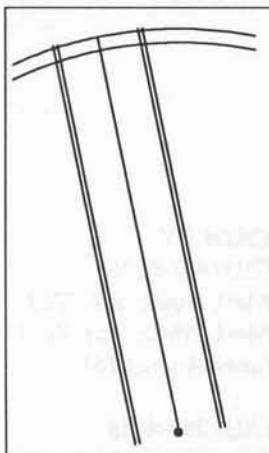


Figure 3

Next, the door jambs are drawn. Enter **Geometry** (ALT + G), *Offset* (F3), and toggle *Dynamic* (F1) off. Select *PerpDist* (F2), at the prompt: "Enter perpendicular distance to offset," type: 1.6; press Enter. At the prompt: "Select object to offset," point with the left mouse button at the radius line. At the prompt: "Offset to which side?" point with the left mouse button to the right. "Select object to offset" appears, pick the radius line again and offset it to the left. Lines at the position of the inner door jambs have now been created. For the outer door jamb lines, select *New Dist* (F7) and reset to .2 (2"). Using the same sequence as above, offset each of the newly created lines 2" to the *outside*. Figure 3 illustrates the result.

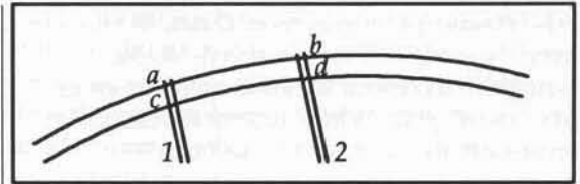


Figure 4

Next, the radius line is erased by selecting **Erase** (E/e), by *Entity* (F1), and pointing to it with the left mouse button. The jamb lines are then trimmed to the wall (arc) lines as follows:

In **Obj Snap** (X), turn *End* (F2) off and verify that only *Intsect* (F7) is on. In *1Ln Trim* (;, F9, F4), at the prompt: "Enter first point of line to trim to," snap to the intersection point marked *a* in Figure 4. At the prompt: "Enter second point of line to be trimmed to," snap to intersection point *b*. At the prompt: "Point to outside," point with the left mouse button anywhere above the trim line. Verify that selection by *Entity* (F1) is active and, at the prompt: "Select entity to trim," point first to line 1, then to line 2.

After lines 1 and 2 have been trimmed (still in *1Ln Trim*), select *New Line* (F8). Repeat the above sequence, snap to points *c* and *d*, indicate *down* as the "outside" direction and trim lines 1 and 2.

Repeat this entire sequence for the inside jamb lines. Figure 5 illustrates the results.

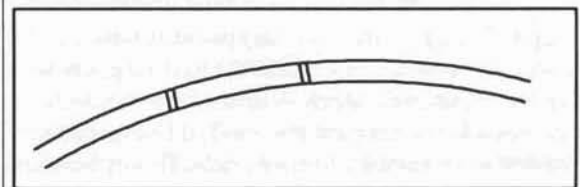


Figure 5

Change the **Obj Snap** menu (X) settings to *End* (F2) only. Erase the portion of the outer wall line between the door jambs as follows:

Select **Erase** (E/e), *Partial* (F9). At the prompt: "Select entity to modify," point with the left mouse button to the outer wall line; it displays as a light gray dashed line as in Figure 6.

At the prompt: "Enter first point of line segment to remove," snap to the point marked *a* in Figure 6. At the prompt: "Enter second point of the line segment to remove," snap to point *b*. At the prompt: "Enter point on the arc to clip out,"

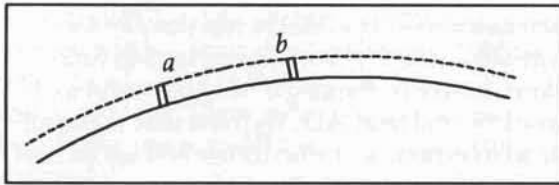


Figure 6

point with the left mouse button to any point along the arc between points *a* and *b*.

Repeat this sequence for the other, inner, wall line. The curved wall has now been cut and lines have been drawn representing the door jambs. Figure 7 illustrates.

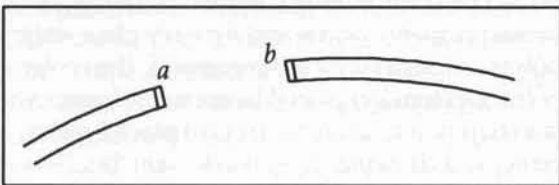


Figure 7

Next, two methods for drawing the door. First, a quick and efficient *technique*; second, a more elaborate sequence of commands. The latter is included as a means of describing the interplay between a series of menu options, not as a recommended drawing strategy.

First, the efficient method. Enter the *Door-Swing* menu (*a*, F9); assure that *DrawJamb* (F1), *CntrPnt* (F3), *Cutout* (F4), and *In Wall* (F5) are all off, and that *Sides* (F2) and *Single* (S3) are both on. At the prompt: "Enter hinge side of door," snap to point *b* (Fig. 7); at the prompt: "Enter strike side of door," snap to point *a*. The result is as in Figure 11. If a center snapping point is desired, use *Geometry, Divide* (ALT + X, F1). Please continue at the paragraph starting with: "Finally, for both methods..."

Next, the more complex method. Turn *Walls* on (=), answer the prompt: "Enter the new wall width," by typing .6, press Enter. Check that *Ortho-mode* (O/o) is on. Draw a new wall below the curved wall by picking two points below the curved wall (either *Side* or *Center* insertion method may be used).

In the *Architct* menu (*a*), select *DoorSwng* (F9) and cut a 3'-0" door in the newly drawn wall. Any insertion sequence for creating the door may be used, though the door should have the correct orientation for its eventual move to the curved wall. Figure 8 illustrates this.

Next, the door and its swing must be rotated to their correct orientation. First, the angle of rotation must be determined. Turn *Walls* off (=), change to *Dashed* line type (*q, q*) and draw a line between the jamb lines as in Figure 9. In the *Measures* menu (ALT + X), select *InclAngl* (S1). Point in turn to the line just drawn and one of the orthogonal wall lines (shown dashed in Figure 9). Write down the value shown on the message line.

Erase (E/e) by *Entity* (F1) the temporary line between the door jambs and the walls and door jambs at the orthogonal wall.

Enter the *Rotate* menu (R/r). At the prompt: "Locate CENTER of rotation," point with the left mouse button anywhere within the door swing. Select *NewAngle* (F8); at the prompt: "Enter ANGLE of rotation from the keyboard," type in the value determined earlier in the *Measures* menu. Make sure that *Dynamic* (S4) is off and select the door and its swing by *Area* (F3). Figure 10 illustrates the result.

Move the door and door swing to their proper position by selecting *Move* (m) and snapping first to the end of the door swing arc (away from the door), then to corresponding jamb line end point to establish the distance to move. Select the door and swing by *Area* (F3). Figure 11 illustrates the contents of the "work" layer at this point.

Finally, for both methods, move all entities to their appropriate layers. In the *Move* menu (m), select *To Layer* (F4). Select the correct layer for the wall. Select by *Entity* (F1) the wall lines, including the inner jamb lines. Select *New Layer* (F0) and the "door" layer. Use *Area* (F3) to select and move all of the remaining entities.

In the *Layers* menu (L/l), turn on the layers for the walls and doors; turn off the "work" layer. If all appears to be correct, delete the "work" layer. Select *DelLayer* (S1); choose the layer named "work" from the layer list and at the prompt: "Are you SURE you want to delete layer 'work'?", answer yes (F5).

It is hoped that, by describing two methodologies for the last portion of this exercise, the somewhat contradictory goals of efficiency and comprehensiveness have been met.

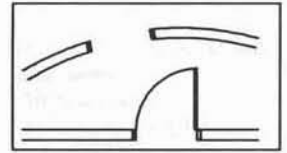


Figure 8

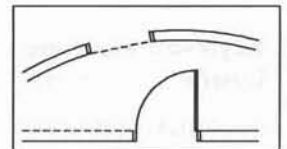


Figure 9

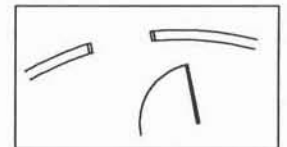


Figure 10

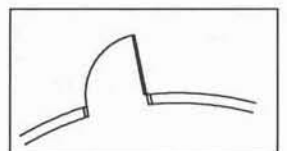


Figure 11

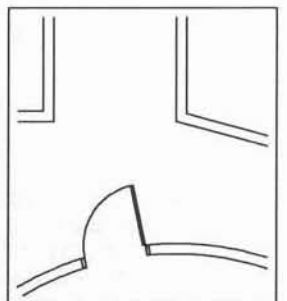


Figure 12



Reference Point

Confusing Words in DataCAD

For the new user, a number of terms used in DataCAD are initially confusing. Understanding their meaning within DataCAD is fundamental to developing good working *technique*.

Ortho View is the normal view orientation in DataCAD; it is, in architectural nomenclature, the **plan** view. All other view types are selected in the modeler (by picking DCAD 3D from the EDIT menu) from the 3D VIEWS menu. Selection of ORTHO from this menu returns to the **plan** view.

Orthomode controls the orientation of line drawing relative to the X and Y axes. When orthomode is on, lines are drawn orthogonal to the axes. SNAP ANG (snap angle) in the GRIDS menu controls the orientation of the cursor alignment. The value selected equals the number by which 360° is divided: selecting 8 sets orthomode drawing to 45° increments. When orthomode is off, lines "rubber band."

Reference Point is accessed from the MEASURES menu or, more commonly, with the \backslash interrupt. It is often desirable, in the creation or editing of entities, to locate an entity *relative* to another point in the drawing. *Reference Point* establishes a "zero value" point. It is most useful when drawing in RELATIVE CARTESIAN and RELATIVE POLAR Input Modes. Figure 1 illustrates its use.

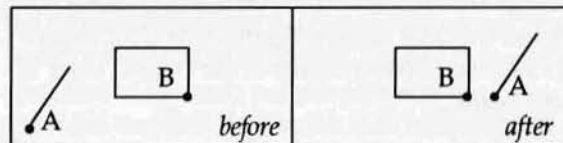


Figure 1

In this example, the line is to be moved to a position such that point A is 5'-0" to the right of point B on the rectangle. The commands to accomplish this (in RELATIVE CARTESIAN) are:

Move (m); snap to point A as the first point of the distance to move; at the prompt "select the second point of the distance to move," press \backslash (REFERENCE POINT); snap to point B; press the space bar for keyboard entry of a distance; enter 5.0 (5'-0") for the X distance and 0 for the Y distance; using ENTITY as the selection type, point to the line.

The logic DataCAD is using to perform this function is: "move, the distance from point A to a point *relative* to point B, 5'-0" in the X direction, the entity selected."

REFERENCE POINT operates in this manner for virtually all entity creation and editing functions. It may be the single most powerful tool available in DataCAD. The new user is encouraged to experiment with its use and adopt it as an integral part of his/her *technique*.

Snap Point is accessed from the MEASURES menu or with the keyboard interrupt: \sim A snap point displays as a small square; it does not plot. It serves as a locator that may be snapped to with the middle mouse button in editing operations. Additionally, snap points are placed by some editing commands. In the GEOMETRY menu, DIVIDE and INTRSECT place snap points as required by the command; the center point (optionally) placed in DOORS and WINDOWS is a snap point, etc. A snap point placed at the center of a drawing sheet border may be snapped to in the PLOT, LAYOUT command.

Object Snap is the "snapping" function of the middle mouse button. Preferences for its control are established by settings in the OBJ SNAP MENU.

The keyboard interrupt for the OBJ SNAP menu is X (upper case). The menu displays 19 options; each is discussed in the manual, pages 5-158 to 5-176. Most of the options are on/off toggles; when a * is displayed, the option is on. More than one option may be turned on at any time.

As a means of gaining familiarity, the new user is encouraged to explore the functioning of the middle mouse button when different sets of controls have been selected. In Figure 2, the

dashed lines were drawn from point A to the solid line, snapping to points along the line. The options toggled on in obj snap were:

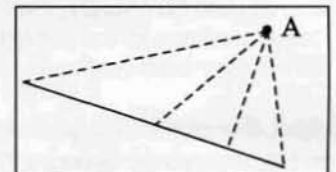


Figure 2

End Pnt, Mid Pnt, and Perpend. The end and mid points of the line were snapped to, as was a point on the line perpendicular to point A.

Once familiar with the way in which each of the options in OBJ SNAP controls snapping, the user should determine a basic group of settings (the ones used in Figure 2 are good for basic drafting). Settings should then be changed to accommodate particular conditions.

Keyboard interrupt:
O/o (toggles on/off)

swOthlud = off
swOthlud = on



POINTS OF REFERENCE

As a regular feature of *Reference Point*, this column will be devoted to providing a guide to secondary sources of information for the **DataCAD** user. These sources fall into two broad categories: publications and "human resources".

Coverage of publications commences in this issue with a listing of available materials. Each is described briefly and ordering information is provided. In future issues, new publications will be reviewed in some depth.

"Human resources" (outside of **CADKEY**) for the **DataCAD** user typically include dealers, CAD consultants, service bureaus, training programs, and fellow users. An article "Dealing with Dealers" is planned, as are articles on consultants, training programs and service bureaus. Under the category of fellow users, there are two formal structures through which users communicate with one another: bulletin boards and users groups. In this issue, descriptions of existing **DataCAD** specific-bulletin boards are provided.

Most importantly, a series of articles covering users groups is planned. These articles will not duplicate the listings provided in *3-D World*. Rather, they will address questions dealing with starting and maintaining a successful users group. The articles will draw upon the experiences of successful (and unsuccessful) groups. They will outline a series of strategies for implementing an organizational structure for a typical users group. The strategies will necessarily be wide ranging, as structures that are appropriate for one group of user may be completely inappropriate for another. In reviewing "case studies," lists of questions to be answered and pitfalls to be avoided will be generated.

The goal of this series of articles is to assist in the formation and maintenance of active users groups. The experience of participants in successful groups is overwhelmingly positive. The willingness of the typical **DataCAD** user to share with his/her fellows knowledge about the day-to-day use of the product is one of the most beneficial resources available. Over the next months, *Reference Point* will be soliciting input from all known users groups and consolidating this information for publication.

Publications:

DataCAD for the Architect is the only book published on **DataCAD** usage. It is comprehensive in its coverage of commands and drawing organization strategy. It contains useful technical information about many aspects of **DataCAD**. It is geared primarily toward the new user. The advanced user can obtain useful information about unfamiliar areas and should find it an extremely valuable aid in designing and implementing a training program for new users in his/her office. A second edition of this book is being released at this writing; a more comprehensive description of it will appear in a future issue.

Cheap Tricks is an inexpensive 6-8 page monthly newsletter devoted to "time saving tips" for the **DataCAD** user. It is avowedly non-technical in nature, striving to point the user toward simple solutions to complex problems. A recent issue included an article on the use of the 3D Rotate command to facilitate model construction.

Cheapware is a distribution service for inexpensive **DataCAD** third-party software. Its catalog includes templates and symbols, keyboard macros, custom linetypes, and simple **DCAL** macros. Listings are published quarterly (sent free to *Cheap Tricks* subscribers) and the cost of the disks is minimal.

WindowIn on DataCAD was a monthly newsletter for **DataCAD** users published from July, 1987 to May, 1991. It provided comprehensive technical information about the use of the program on a menu-by-menu basis; it detailed the functioning of various support files and explored issues of software and hardware configuration problems. It suggested strategies for efficient management of drawing files and addressed topics surrounding the management of **DataCAD** within an architectural practice. It also provided reviews of **DataCAD** third party products. Articles in the earliest issues (based on version 3.1) are relevant today. Back issues are available individually or as complete sets.

The annual *Applications Guide* contains complete listings of third-party products for **DataCAD**. Each product listing includes a summary of features and ordering information. The guide is available from **CADKEY** at no cost.

DataCAD for the Architect
Carol Buehrens
TAB Books, Inc.
Blue Ridge Summit, PA
17294-0850

Cheap Tricks and Cheapware
Shu Associates
10 Thacher St.
Boston, MA 02113
(617) 367-9622

WindowIn on DataCAD
(back issues)
C.L. Davis Consulting
Associates
P. O. Box 502
Middlebury, VT 05753
(802) 388-7981

CADKEY, INC. Applications Guide 1991
CADKEY, INC.
440 Oakland St.
Manchester, CT 06040-2100



Boston Society of Architects
 (617) 737-8102
 300/1200/2400 baud;
 8 bits; no parity; 1 stop bit
 24 hours/day 7 days/week

RADIUS Bulletin Board
 (919) 556-6173
 300/1200/2400 baud;
 8 bits; no parity; 1 stop bit
 6 days/wk., 7:00 am - 9:00 pm

CADKEY Bulletin Board
 (203) 647-8523;
 8 bits; no parity; 1 stop bit
 7 days/week, 24 hrs/day

Bulletin Boards:

The BSA bulletin board is the most active one for DataCAD users. It has an active multi-topic DataCAD discussion area. Its downloads area contains most of the public domain DataCAD material currently available.

The RADIUS (Raleigh Area DataCAD Information & User Support Group) bulletin board is relatively new but contains some interesting discussion and a growing up/downloads area.

The CADKEY bulletin board contains specific files that may be significant to individual users. Tech Support, for instance, might refer a user to a new or updated graphics driver posted to the board. A DataCAD discussion area exists on the board; with more frequent access by users, it might provide a forum for direct communication between CADKEY and DataCAD users.

The above listings are, necessarily, incomplete. Please forward additional materials to the address listed below for inclusion in future issues of *Reference Point*. If warranted, a complete bibliography of DataCAD resources will be published at a future date.

NEXT ISSUE

Multiple Scale Plotting from one Drawing File including use of the Plot 40 macro

More Confusing Words in DataCAD focusing on coordinating ObjSnap & LyrSrch

Some Uses for Selection Sets and their inclusion in Keyboard Macros

PUBLICATION INFORMATION

Reference Point is published bi-monthly by:

CADKEY INC.
 440 Oakland Street
 Manchester, CT 06040

After August 16, 1991:
 4 Griffin Road North
 Windsor, CT 06095

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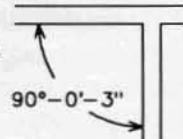
USER INPUT

Reference Point actively encourages communication from DataCAD users. Questions, tips, and suggestions for topic areas are some (but not all) of the possible forms for input. Any and all communication is desirable.

Every effort will be made to incorporate *your* input in the most appropriate and responsive manner possible. The format for accomplishing this will depend entirely upon the materials received. In one issue, *User Input* may appear in the form of *Questions and Answers*; in another issue, it may be *Tips from Readers*.

To get this feature started, a tip from the editor:

Have you ever drawn a wall, with ORTHOMODE toggled on, then trimmed it to a previously drawn wall (theoretically perpendicular to it) with T INTSCT, only to have it display with "jaggies"? Upon measuring the angle between entities have you found something like the illustration to the right?



When the wall lines were checked before trimming, they measured 90°; what happened?

In a conversation with Bill D'Amico, of Casco Systems in Freeport, ME, we surmized that this problem resulted from the fact that DataCAD is a single-precision program. Every drawing file has an "absolute 0" point (X = 0, Y = 0 in ABSOLUTE CARTESIAN INPUT MODE). The walls in the example above were so far from this 0,0 point (about a mile, somehow) that the calculation of their intersection generated an inaccuracy. When the same entities (untrimmed) were moved closer to 0,0, they trimmed correctly.

To avoid this, and similar problems, I have checked each of my Default Drawing files to assure that the 0,0 point corresponds to the center of the drawing field. In default drawings that contain a sheet border or other "drawn" information, I have moved the entities such that the center of the sheet (plot center) is at 0,0. This seems to have solved the problem.

Ed. Note: I have been an active member of DBUG (the Boston DataCAD Users Group) and frequent user of the BSA Bulletin Board. Through these activities, the base of my skills with and knowledge about DataCAD has been greatly broadened. Throughout these pages, I will endeavor to credit individuals as the sources of specific information and techniques. Any errors or omissions are unintentional and I apologize for them in advance.