



DataCAD Dealer

Microecture's Newsletter for Partner Dealers

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Volume I, No.1

You said you wanted it, so here it is...the first-ever MICROTECTURE newsletter for DataCAD Dealers. With this bi-monthly publication we hope to provide a steady stream of informative communication, a key to both your success and ours.

Some of the articles will originate from in-house at MICROTECTURE. Some will come from our representatives in the field. And some we hope will come from you, our dealers, who often have ideas and expertise that everyone could benefit from. We encourage newsletter suggestions and contributions from all of you.

Meanwhile, we hope you find this *DataCAD Dealer* a useful sales aid. Thank-you for your initial response and encouragement!

Sincerely,

The MTC Team
The MICROTECTURE Sales Team

► From the Field...

● SUCCESS AT THE NAHB CONFERENCE

Eighty-thousand people a day and four to five demos an hour.

It's no wonder that the National Association of Home Builders' conference on January 15th - 18th, spurred calls to MICROTECTURE from builders all over the country.

At the conference in Dallas, DataCAD was represented by Idea Net of Dallas, TX. Stephen Giles, MICROTECTURE'S Western Regional Manager, was also in attendance to assist Brian Anderson and his Idea Net staff. In addition to the 4 to 5 demos an hour, they gave out all 600 pieces of DataCAD literature they had brought with them.

DataCAD was also represented in the Andersen Windows Corporation booth. Andersen's CADD I, the DataCAD version (release expected in early April), was demonstrated by Andersen's Steve Green to a very receptive crowd. According to Green there was a tremendous amount of enthusiasm and interest in the CADD I product for DataCAD.

Builders should not be underestimated as a market for DataCAD. According to Brian Anderson, builders like DataCAD because they are able to get plans from an architect on diskette. Then, if there is a change to be made during the building process, the builder can do it himself on DataCAD and get the changes

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SUCCESS (cont')

approved by the client. This saves the cost of an architect and saves time for the builder.

Builders look out! The soon-to-be-released DataMerge from MICROTECTURE will do the necessary cost estimating and project management using the DataCAD drawings. Look for more information on DataMerge to follow as the release of the product approaches. ●

► Today's Students; Tomorrow's Architects, Engineers, and Builders:

● THE AIAS/MICROTECTURE STUDENT GRANTS PROGRAM

In December of 1987, MICROTECTURE and the American Institute of Architecture Students (AIAS) officially announced the beginning of an educational grants program to schools of architecture. And since then the program has been very well received.

The program is currently on schedule. Applications were available from the AIAS as of the first of February, and the deadline for their return, March 15th, is fast approaching. The Grants Selections Committee, composed of the sponsors' representatives, will evaluate all the applications and select the programs for funding. The AIAS/MICROTECTURE Educational Grants recipients will be announced on April 15th.

We've long recognized the benefits of getting DataCAD into the nation's schools. When the DataCAD grants are awarded we will work through our Authorized Dealers to set up faculty

training and support for the colleges and universities receiving grants. Training and support, not included as part of the program, will be contracted by the schools with Authorized Microecture Dealers.

The goal of this program is to provide grants of computer-aided design software to:

- Colleges and universities having exemplary undergraduate and graduate schools of architecture accredited by the National Architectural Accreditation Board.
- Other schools where support is warranted to enhance education in architectural technology.
- Schools with high minority student enrollments that have been recognized as a national resource center for minorities in professional careers.
- Special educational organizations operating at the national level which are supportive of the higher educational system in general and architectural education in particular.
- Higher education institutions which warrant special consideration because of their continual excellence in education.

Please note that the program is *not limited to schools of architecture accredited by the*

NAAB. If you know of an institution in your area which meets any of the above criteria, by all means encourage them to apply for a grant.

Additional applications can be obtained from MTEC. Ask your regional account manager! ●

☐ CALENDAR CORNER

MARCH

- 20-23 Hanover Fair, Germany
- 26 NCGA, Anaheim, CA
- 28-30 DataCAD Dealer Training, Charlottesville, VA

APRIL

- 1-2 Gulf Coast CAD Symposium
- 15 AIAS/MICROTECTURE Grants Program Awards Announced
- 25-27 DataCAD Dealer Training, Charlottesville, VA

● ALL ABOUT AUTHORIZED TRAINING CENTERS

Recently, each DataCAD dealer received in the mail an application to become a DataCAD Authorized Training Center. So far the response to these applications has been overwhelmingly positive. But many dealers who are still considering whether or not to apply have questions concerning the purpose of the program and the effect it will have on their status as DataCAD dealers. Let's set the record straight.

The purpose of the ATC program is twofold: to raise the overall quality of training which is being given to customers by DataCAD dealers, and to recognize and reward those dealers who have already demonstrated excellence in training.

Raising The Quality Of Training

Many of our dealers have expressed their frustration in trying to balance sales efforts directed at potential customers with training efforts directed at those who have recently purchased. Everybody knows that a well-trained customer is an excellent reference which leads to more sales. But to get a well-trained customer, you have to have an excellent training program, and that takes time and money.

The ATC program is intended to address this first situation. If the dealer shows us that his/her INTENTION is to provide high-quality training (by setting up a classroom or hiring an instructor or devoting equipment, etc.), then MICROTECTURE will promote that dealer by making the dealership an **Authorized Training Center**.

We'll publish the ATC's name in *Perspectives* and in the *DataCAD User's Guide*. We'll also ask that each ATC Dealer purchase the *Authorized Training Curricula*: student and instructor's guides, and classroom materials needed to teach DataCAD effectively. This combination of credibility and curricula wins new customers while ensuring that existing

customers are adequately trained and ready to become good references for future sales.

Rewarding Excellence In Training

Some DataCAD dealers have already invested a considerable amount of time and money in their training programs, and as a result have excellent programs which are also great selling tools, helping to give the dealership added value. MICROTECTURE wants to reward these dealers by making the dealer not only an **Authorized Training Center**, but also an **Advanced Training Center**.

Each **Advanced Training Center** will be profiled in an upcoming issue of *Perspectives*, and will be listed in the *DataCAD User's Guide*. Also, each **Advanced Training Center** will be encouraged BUT NOT REQUIRED to purchase the *Authorized Training Curricula*. An **Advanced Training Center** may use any curricula it sees fit, as long as it is first approved by MICROTECTURE.

The Highest Honor

Of the dealers who qualify to become **Authorized Training Centers** and **Advanced Training Centers**, a few dealers will become **Master Training Centers**, indicating that they are models of training excellence.

Master Training Centers will have all the privileges of **Advanced Training Centers**, plus the opportunity to work with MICROTECTURE in the development of future training products.

In Summary

We've tried to devise a program which will help many dealers become better training centers for their customers, while encouraging and rewarding those dealers who have already achieved training excellence. I hope you'll take time to fill out your ATC application and return it soon. We're waiting to give you the tools you need to compete. ●

► A Dealer's View...

● THUMBS UP ON NETWORKING SOLUTIONS

By Stewart Brown, AIA, Architectural Intelligence, DataCAD Dealer

The use of local area networks (LAN) in the architectural micro CADD environment is finally gaining acceptance. As CADD usage increases and firms add workstations, the need and demand for LAN solutions will increase. This directly translates into an increase in opportunities for the CADD dealers capable of providing these solutions.

To understand what is required, the dealer must understand the way Architects work. Architects typically work in teams, and the jobs they work on usually require months of work and have several intermediate deadlines before the final one. This results in a fairly steady flow of work between flurries of anxious activity near the deadlines.

The typical office will find that, compared to stand alone workstations, a network aides the constant ebb and flow of manpower and resources to meet these deadlines more effectively. First, networks allow project team members to more easily share information. Second, they facilitate the setting of standards, whether for the office as a whole or for just one project. Third, networks allow for the shifting of resources (i.e., machines and personnel) easily from project to project.

Networks can be classified by a number of criteria, including topology, communication protocols, media, speed, and cost. To simplify, I generally divide the ones that I configure with DataCAD into three categories: the slow speed "Zero-Slot" LANs, the medium speed peer-to-peer LANs, and the high speed dedicated file server LANs.

The simplest and least expensive

networks (with the exception of sneaker networks) are the so-called "Zero-Slot" LANs. These typically link up computers in the network via serial ports and are consequently very slow. Typical speeds claimed are around 115K bits per second. In practise, the data transfer rates feel like the rates achieved with floppies. My favorite in this group is the Knowledge Network by Idea Associates. It uses a buss topology with standard telephone wire as media. The network commands are the same as DOS commands, so there is little extra to learn, and the peer-to-peer resource sharing capabilities are excellent and flexible. You can assign printers at any station as network resources so they can be used by any station on the network, and the same can be done with hard disks at individual stations. Although slow, this LAN works well for transferring files, is very easy to operate and costs only \$150 per node, complete.

The medium speed peer-to-peer LANs offer more of the features for which LANs are noted. Working through network interface cards which are installed in each computer, they offer speed, typically 1 megabit per second claimed. My favorite in this group is the 10-NET system by FOX Research. This network seems to have been designed with the CADD environment in mind. It uses twisted pair wiring in either a bus or star topology, and can be implemented in a manner far less expensive than the high speed LANs. Like the high speed LANs, however, it can be expanded to include dedicated file servers for central data storage. It has a relatively sophisticated operating system which includes security features, print spooling with a prioritized print queue, electronic mail, electronic bulletin board, and diagnostics. This system is a good choice for those wanting to start small, keep the

costs down, and are willing to trade speed for dollars.

If costs are not the major concern, the high speed dedicated file server LANs offer the best CADD networking solutions. Like the medium speed LANs, network interface cards are installed in each computer. One computer on the network, usually one with a large hard disk, is dedicated as the file server - the central mass storage device for the entire network. Additionally, the server performs other system chores such as providing security for files and managing the plotting process. Finally, all the computers on the network are linked together, usually with coax cable.

There are many high speed LAN systems, but two companies, Novell and 3Com vie for top honors. Although each company sells hardware systems of various topologies, the essential and proprietary ingredients that each company pushes are its networking operating systems. Each provides a multitude of features, including print spooling, security locks,

electronic mail and more. Of the two, I prefer Novell, perhaps because of my greater familiarity with it, but also because it has consistently performed faster in benchmarks. Novell runs on many hardware configurations, but the marketplace today has two major groups - those compatible with "Arcnet" and those compatible with "Ethernet" specifications.

Each specification has advantages and disadvantages in use as a CADD network. To begin a comparison, consider topology, or the arrangement of devices and communication lines. Electrically, each of the systems is a buss. If there is a problem with an individual station, the others on the network are not affected. Physically, however, Arcnet is linked in a starburst fashion from a central hub to stations or other hubs, while ethernet typically remains a buss. The hub arrangement is an advantage to dealers and users, for unlike a buss, if there is a problem in an Arcnet trunk line, only the stations downline from the break are affected. In general, Arcnet has a reputation among dealers for being easier to install, debug, and maintain than Ethernet systems. I should note, however

- Though networking has been done successfully with DataCAD, it is not technically supported by MICROTECTURE. If you desire more information about the systems mentioned in this article, here are the phone numbers of the manufacturers.

FOX Research	1-800-358-1010
Idea Associates	1-800-343-0056
Gateway	1-800-367-6555
Novell	1-800-526-5463
Pentagon LTD	1-212-809-2066
Thomas-Conrad	1-800-332-8683
3Com	1-800-638-3266
Western Digital	1-800-847-6181

NETWORKING (cont')

that 3Com has announced a version of the EtherLink system that works through a central hub. Dealers preparing to install new Ethernet systems should investigate this alternative. In use of media, both systems are similar. Although the mainstay cabling system is shielded coaxial cable, versions of these systems are available that use twisted pair and fiber optic cable. In a call with 3Com technical support, however, only coax was recommended for CADD networks.

In communication access procedures, the systems are entirely different. The Ethernet systems are Carrier Sense, Multiple Access with Collision Detection (CSMA/CD) and the Arcnet systems are Token Passing. CSMA/CD has been compared to being in a room full of people who all want to talk but who must listen for an opportunity to grab the floor. If two or more people try to talk at the same time there is a "collision". They must back off, wait a while, then try again. This scheme works best in lightly loaded networks; in ones heavily loaded, the collisions can build up significantly and delays can become unpredictable. Token Passing, however, is more democratic and predictable. A message token is passed from station to station in a scheme designed to give stations a chance to transmit in turn. This scheme is slower in lightly loaded networks, but in heavily loaded ones each station makes predictable progress. Ethernet calls for data transmission at 10 megabits per second (mbs) whereas Arcnet calls for 2.5 mbs. In actual use, data throughput is much slower. The best series of benchmarks I've seen is that done by PC Magazine from 12/86 to 4/87. Based on those results and from my own experience with each system, I can make the following observation: in a heavily loaded environment with four CADD stations constantly accessing the server, an Ethernet system running

Novell on 3Com Etherlink cards and an Arcnet system running Novell on typical Arcnet cards are about dead even.

To get more speed out of an Ethernet system, consider using interface cards with higher claimed throughput, such as those manufactured by Gateway or Western Digital. To get more speed out of an Arcnet system, consider using the new 16 bit cards such as those by Thomas-Conrad and Pentagon LTD. Each of these alternatives offer speed increases of 15-50% in their respective systems. To avoid problems while getting the most speed and reliability out of any network, the following is recommended: First, try to keep the network traffic down. Download the drawing files from the server to local hard or ram disks. Second, use a fast, premium quality hard disk in the server. Third, use lots of ram in the server for disk caching. For example, a fast 286 based server with lots of ram and a fast hard disk could very well outperform a 386 based server with little ram and a slower disk. Fourth, do a good job on the cable installation and keep the cables out of harm's way. My recommendation for bare minimum server disk space for a four station DataCAD network in a busy office is 100-130 megabytes for the first year, with an empty drive bay in which to expand. And finally, beware tape drives (and other devices using interrupts) not known to work specifically with your configurations, despite manufacturers' claims of being Novell or network "compatible."

If properly installed and configured, the firm should be more productive and satisfied with any of these solutions, and the dealer will be appreciated for having the expertise. Importantly, the dealers who can network DataCAD will be setting themselves apart for more numerous and profitable sales.●

● 3-D MODELS SOUGHT FOR SHADING/RENDERING

MICROTECTURE will soon be releasing a shading/rendering system to work with DataCAD and the DC Modeler. At this time we are in the need of a hand full of sample models which can be used to test and/or demonstrate the rendering package.

We are seeking three dimensional models to use for testing and demonstrations. Unfortunately, there are no awards or cash involved here, but if a model is used in any publication or brochure, the name of the firm or designer will be stated if they so wish.

Besides testing of the rendering package, we are continually looking for good examples of drawings and models to use for internal testing, publications, and brochures.

Models and drawings are best sent to us on 5 1/4", high-density (1.2mb) diskettes. If the model will not fit on the diskette, you may use the DSBbackup or the DOS Backup command to store the model on multiple diskettes. If you or your customers would like the diskettes returned, please attach a note requesting this to the diskettes. Thanks in advance for your help with this! ●



MTEC MOVES UP!



As most of you know, we have moved our offices here in Charlottesville. While the distance of the move was a short one - only a couple blocks down the street! - it was a giant step forward in helping us better serve all our dealers and clientele.

In case you don't already have it, our new address is:

*4th Floor Towers Office Bldg.
1224 West Main Street
Charlottesville, VA. 22903*

The telephone and FAX numbers will remain the same:

*Phone: (804) 295-2600
FAX: (804) 977-4058*

The new building has almost doubled the amount of space we had in our old location and has allowed us to centralize all of our activities, including training. This added space also gives us more space to work in and more room to grow.

We are excited about our new workplace and we hope that you all get a chance to see our new offices in the near future (or as soon as we get the painters and carpet-layers out of the way!) ●

MEET OUR REGIONAL MANAGERS ■ ■ ■

<i>Northeast/Mid-Atlantic</i>	Mark A. Dowjat Gaithersburg, MD 301-840-5435	<i>Mid-West</i>	James D. Zeman Chicago, IL 312-387-9400
<i>Southeast</i>	Thomas T.R. Jennings Atlanta, GA 804-295-2600	<i>West</i>	Stephen J. Giles Phoenix, AZ 602-482-0558



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