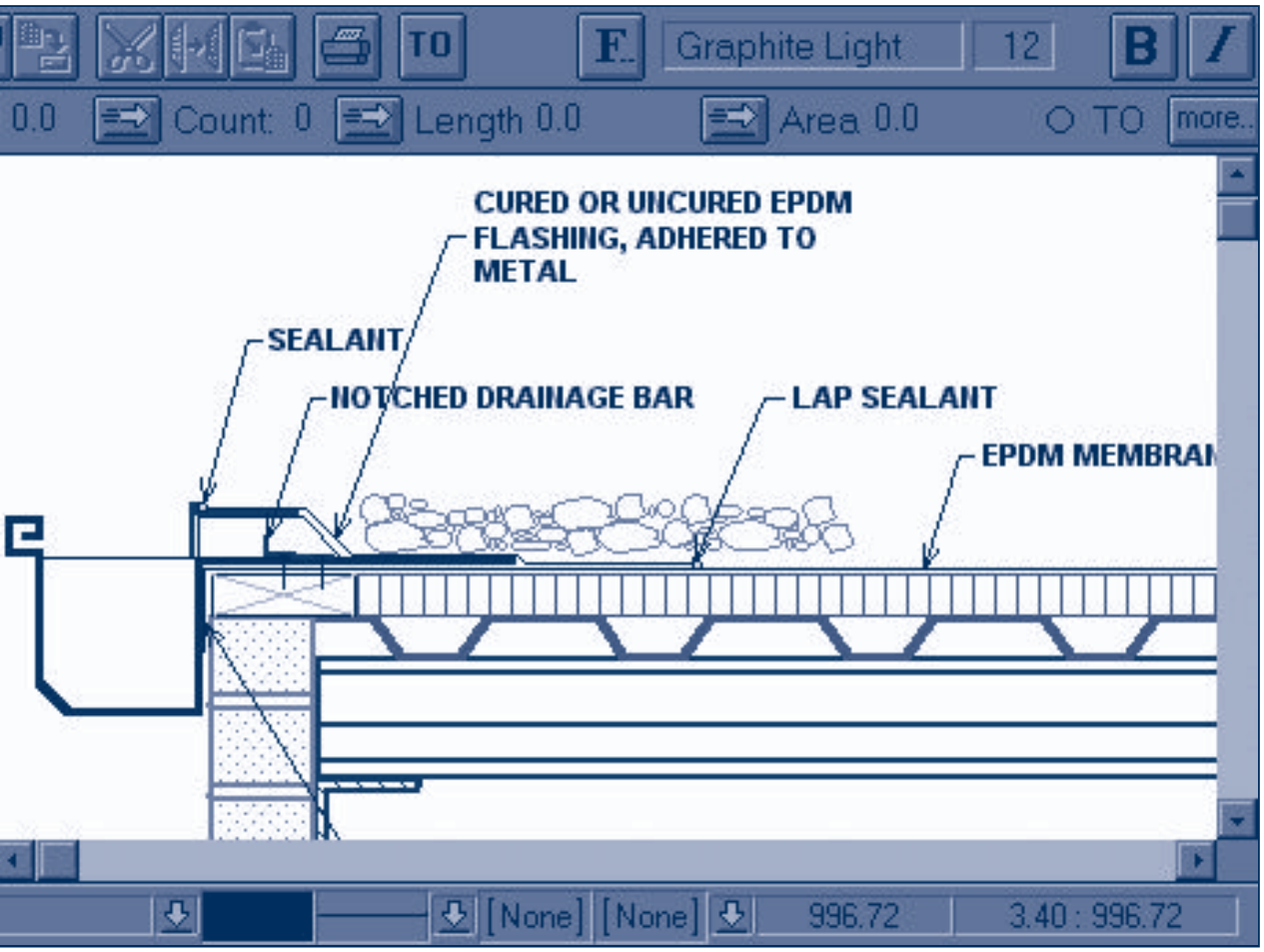
sands of paper drawings would.

Once stored on the computer, the drawings do not degrade as paper drawings do; a drawing can be called up years later and it is the same as when it was stored. Copies of the files may also be made on tapes or disks for backup purposes. So if a computer crashes without a backup, files may be copied to another computer in a matter of minutes and the company is back in business.

If drawings are organized well on the computer disk, retrieval is simple. However, this is a big IF. In this writer's experience, most offices do not organize their computer files well. This is a skill that is not difficult to learn and is crucial to being able to retrieve a drawing quickly.



CAD programs allow you to view and modify manufacturers' details.

Companies should have a computer file storage plan and stick to it. This will make retrieval of any computer file fast and easy.

Exchange files with others

Another big advantage of CAD is the ability to exchange drawings with others. If a customer's roof drawing already exists in CAD format, the consultant will be able to not only view it with his CAD program but modify it as well. The same goes with details. There are literally thousands of pre-drawn details available. A lot of them are free of charge. Sources like the NRCA charge a small fee while manufacturers generally hand them out free.

The nice thing about this is that details are slow and tedious to draw, even with a CAD program. So if someone else's details can be used and modified, the consultant is ahead of the game.

WHAT CAD PROGRAM IS RIGHT FOR YOU?

There are hundreds of CAD programs available on the market, ranging in price from $10 to over $5,000. What's the difference? Pricing of software is an interesting thing. This writer has seen $40 CAD programs that have everything a $4,000 package has. The reason for the difference in price is simply a different marketing philosophy. The low-price company has decided it is better to sell more at a lower price, while the high-price company feels it can command a higher price, maybe because it is an established company.

Whatever the reason, it is best not to focus too much on price. This should not be the main selection criteria. Instead, focus on what program will do the job. Remember, very often the money saved in the initial purchase will be lost many times over if time is lost struggling with a program that doesn't fit the company's needs.

Also, as with most software purchases, the cost of the software is insignificant when compared to the time and money spent learning and implementing the program.

What are your needs?

Like any sales process, the first thing required is an analysis of the company's needs. Who in the company will use the program, and what kind of work do they do? There are basically two kinds of people who make design drawings—those who make drawings all the time and those who only need to make drawings occasionally.

Some companies will have a dedicated draftsman in their office. This person's needs and skills are usually quite different from the other people in the office. For example, they are probably already trained in the use of CAD programs and thus tend to

want more features. However, some of the drawing that goes on in a consultant's office is done by people who are not draftsmen. Drawing is just part of their job. This type of person is typically new to CAD.

As with most software programs, if the operator doesn't use a CAD program regularly, he or she will tend to forget how to use it. This isn't a problem for a dedicated draftsman because he uses the program every day. Therefore, a CAD program that is loaded with features and has a steep learning curve is not a problem.

However, for the other people in the office, a simple program with fewer features is more desirable because it is easy to learn and more importantly, it is more likely that they will remember how to use it.

Generic versus industry-specific programs

Okay, so what to buy?

There are two basic kinds of CAD packages available: general and industry-specific. A general CAD program is made for the masses: architects, engineers, circuit board designers, etc. Thus, there is no emphasis on roofing-specific features, but instead the product will often be a very mature, feature-rich one. The name most people probably recognize in this category is AutoCAD.

General CAD packages tend to be complex, and thus have a steep learning curve, but they do everything imaginable. For the dedicated draftsman, this may be perfect, but it may not be suitable for the rest of the company.

On the other end of the spectrum are industry-specific CAD programs. They have a much narrower focus. These tend to be specific to roofing only or they will cover roofing and a few other similar markets. Because of this focus, they tend to have roofing-friendly terminology and interfaces, which makes them easier to use. This type of product is better suited to the second category of person who doesn't draw all the time. But because of its simplicity, it may not appeal to the dedicated draftsman.

Evaluate the people in the office to see into which group they fall.

Quality Support

Like any software package, support and updates are very important. Usually, for a modest fee, you can get updates to the program as they become available. This is an inexpensive way to keep up with the latest technology available.

In comparison, a general CAD package will add general features, while the industry-specific CAD package will add general features plus roofing-industry-specific features.

When it comes to support, ask for references and talk to them. Quality support is the key to solving problems and working successfully with the product.

Once again, the general CAD package will probably not have a support person who knows roofing, while the industry-specific package should. So when a roofing-specific problem comes up, the industry-specific package is more likely to solve the problem quickly.

CONCLUSION

The largest investment in CAD technology will come not in the initial purchase, but in the time invested after purchase. First be sure the company's needs are clearly understood, then purchase a CAD program from the company that fits those needs, both with product and support.

A successful CAD implementation will change the way a roof consultant works and prepare him or her for the future. ■

About the Author

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Rob Minialoff is the President of True North Estimating Systems in Toronto, Ontario and a member of RCI. He was born into the third generation of a roofing family and has worked in all aspects of his family roofing business, starting with a pitch tear off on a windy day in 1977. Recognizing a lack of roofing-specific estimating software on the market, Rob started True North Estimating Systems in 1988. The company's flagship products are Roofware and RoofCAD. Rob can be reached at (416) 778-0843 or rob@roof-ware.com.