PC Technology moves forward for all dairy businesses

Not long ago most dairies that used computers had one PC on the farm. This PC had the accounting program, the herd management program, and the kids' games loaded on it. When someone needed to use the computer they went to wherever the computer was located. And, since computers were relatively expensive, with few applications, this overall scheme worked out well.

Over time we learned how to use the computer more, and we discovered that we needed easy access to the information that was on it. Frequently we realized this when we were on the opposite end of the farm from the computer. So off we went to the barn office to use the computer only to discover that someone else was using it. Yes, it had come to this. There was a waiting line at the keyboard.

Fortunately computers became less expensive so we could afford to have more of them spread out across the farm. This helped alleviate the problem of distance and competition to use the PC. However, it created the problem of keeping all the computers updated with current information. Putting data on a disk and carrying it from one computer to another was, and still is the most common way of solving this problem. However, on many operations this method became impractical as the number of computers and the distance between them grew. It also did not address the issue of data entry. We were still forced to go back to a single central computer to input data. What these dairies needed was a way to share the data, in real time, between all the PC's on the farm.

Networking

The solution for data sharing is networking. Networking is a method of connecting multiple computers to each other so they can share data, printers, and other resources. Originally networks required that we run a wire to connect all of the computers on the network. Often the task of running a wire from point A to point B required digging a trench, burying cable and doing serious carpentry work.

We now have a technology emerging called wireless networking. Wireless networking offers all the benefits of a traditional wired network without burying cable and often requires none or very little carpentry. These wireless or radio frequency (RF) networks can be used to connect to a computer in the other room or on the other side of the dairy. The coming of age of wireless technology makes it possible to share resources at multiple points almost without regard to distance or site design.

Wireless networking opens up a whole new way for us to think about sharing data to gain efficiencies. For example, it makes it practical to network with the computer in the heifer barn across the road and enter heifer data right where it happens. Or, you can network the office computer into the barn computer so you have access to financial and production records simultaneously. Wireless networking also makes it possible for you to network with the computer in the shop so you can use the Internet to look up and order parts. The possibilities for sharing and moving data are almost endless once we have removed the physical constraint of running wires everywhere we want data to go.

The cost of installing a wireless network runs from a few hundred dollars up to several thousand dollars. Distance is the most obvious variable when calculating the cost of a network. Generally, distance=dollars when you are working with wireless networking. Any solid objects between the points on the network and the number of computers involved will affect the cost of setting up the network. Solid objects between the points on the network can also have a significant impact on the quality of a wireless network; the signal simply does not transmit well through them. Getting through or around them will require more or higher powered equipment, each of which add to the cost. Likewise, each computer on the network requires some additional hardware that will increase the cost.

The most basic form of wireless networking is when two computers are networked directly to each other. This is referred to as a "point-to-point" network. This method works great if you only have two computers and you do not expect to add more in the near future. The cost for a short-range point-to-point nework with less than fifty feet between the computers will begin around $300.

If you want to have more than two computers on the network it will likely require one or more wireless access points. These devices act as the hub or center of the network. They help control who can be on the network and they govern the flow of data. The cost for long distance or multiple user networks will begin at approximately $1000.

Mobile Computing and the VAS Cowcard Program

Mobile computing is the next step in shared access to data on the dairy. In the past we have thought of computers as stationary objects. However there is a new breed of computer called the Pocket PC. These are pocket-sized computers that have many of the same capabilities of a traditional desktop computer including wireless networking. These units equipped with wireless networking capability sell for around $300. Combining wireless networking and Pocket PC technology can make it possible for a virtually unlimited number of people to have instant access to cow records anywhere on the dairy.

The cowcard program from Valley Agricultural Software is a good example of software that has been developed for the Pocket PC. The cowcard program links to Dairy Comp 305 and puts all of your cow data literally in the palm of your hand. The cowcard program uses the wireless network to refresh data or send updates back to the main computer anytime you choose. No more walking back to the computer to check on a due date or a pen number, and competition for the keyboard is greatly reduced. Valley Agricultural Software recommends using the Dell Axim pocket PC to run the cowcard software. Axims equipped with wireless networking capability are available on-line at DELL.com. The cowcard software is currently in development and under going beta testing on dairies across the US. A subscription price will be announced later this year.

Not only are PC's becoming more and more common on dairy operations, but technology is making them an even greater part of the daily management scheme.

Computers and Wireless communication can improve efficiency on many dairy operations.

For more information, contact Dairy One at 1.800.496.3344, or e-mail dmr@dairyone.com.