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Calf Note #117 – Data Protection

Introduction

Increasingly, management of production enterprises – whether dairy farms, calf ranches, or other production – is driven by the data we've collected in the process. We've become quite expert at collecting data – body weights, dates of birth, sizes, ages, health records, economics, etc. How the data are collected and stored is critical to our business.

As the amount of data increases, the need for protecting that data increases also. In the early days of computers, errors were more common, so it was necessary for everyone to keep a backup copy of their data on a second (or third!) floppy disk. However, as our computer storage capacity (i.e., disk drives) have become larger and more reliable our need for protecting our data has decreased. It's a false sense of security, because when we lose data our loss is usually greater and more dramatic than in years past. So, this Calf Note is a simple reminder to take care of your data!

My problem

During a recent trip overseas, I had the opportunity to visit several customers and prospective customers near a large city. At the end of a long week of working, our group decided to drive from our last visit to dinner at a nice restaurant in the downtown section of the city. This was a large metropolitan area and we were in a nice area not known for crime.

Unfortunately, my computer was stolen from the car while we ate. The loss of the computer, along with all of my data was quite a disaster – not to mention the damage to the car and loss of other valuables. Unfortunately, I didn't have a backup of my computer. The last bit of information that I have saved (on CD) was about 9 months ago.

As you might imagine, it's been difficult. I've spent the last couple of weeks trying to reconstruct files, data, presentations, etc. that might have been stored on a network, sent to colleagues, etc. I've been able to collect some of the data, but most of it is gone.

My purpose here is remind everyone involved in management that our data is our business. We need to take care of it. Since it's our information, it's also our responsibility to protect it. Don't rely on others. Be proactive and set up a program of regular data protection and backup.

Back up storage options

There are a number of ways to back up and protect your data. Some of these include:

1. *Compact disks.* These are cheap, available and easy to store. One disk will hold up to 700 MB of data, so they are a good choice. The primary drawbacks to using CD's is that you have to remember to do the backup and you need to store them in a safe location.

2. *On-line storage.* Companies offer services that will automatically backup your critical data and store it off-site in a secure location. If you do a Google search for “computer backups online” you’ll find at least a dozen sites that offer backup services. This approach is appropriate for frequent (daily) backups of critical data with technical support. But it comes at a price. One site offers 4 GB of data storage for \$19.95 per month.
3. *Secondary hard drive.* This is a great option. With the price of external hard drives going down, the purchase of an 80 GB external hard drive in the U.S. is now about \$100 to \$150, depending on features you want. Most of these drives connect via USB port, which makes them handy to use. They’re small, compact and portable and can easily be stored in a separate location. Actually, I wouldn’t recommend an second internal hard drive because it is possible for theft or damage (e.g., lightning) to damage both internal disk drives. Better to have a second disk drive that can be plugged into the USB port, used, and then stored separately.
4. *Others.* Many other options exist – Zip drives, floppy disks, and other media can be used for backing up data. Each has advantages and disadvantages – the most common of which is limited space to back up files. It’s amazing how much data we generate and limited storage should not be an excuse for not making backups.

How to do it

One of the easiest ways to make back ups as painless as possible is to schedule them to occur when you are away – say to run at midnight or 1 a.m. If you leave your computer on all the time, you can set up the system so that the computer will run the job automatically. Microsoft Windows has a utility called Backup that allows you to schedule a backup as often as desired at any time of the day. Here are the steps to do so – these steps were taken directly from the “Help and Support” Section of Windows:

To schedule a backup:

1. Open Backup. The Backup Utility Wizard starts by default, unless it is disabled.
2. Click the **Advanced Mode** button in the Backup Utility Wizard.
3. Click the **Backup** tab, and then, on the **Job** menu, click **New**.
4. Select the files and folders you want to back up by clicking the check box to the left of a file or folder under **Click to select the check box for any drive, folder or file that you want to back up**.
5. Select **File** or a tape device in **Backup destination**, and then save the file and folder selections by clicking the **Job** menu, and then clicking **Save Selections**.
6. In **Backup media or file name**, type a path and file name for the backup file, or select a tape.
7. Select any backup options you want, such as the backup type and the log file type, by clicking the **Tools** menu, and then clicking **Options**. When you have finished selecting backup options, click **OK**.
8. Click **Start Backup** and make any changes you want to the **Backup Job Information** dialog box.
9. If you want to set advanced backup options such as data verification or hardware compression, click **Advanced**. When you have finished selecting advanced backup options, click **OK**.

10. Click **Schedule** in the **Backup Job Information** dialog box.
11. In the **Set Account Information** dialog box, enter the user name and password that you want the scheduled backup to run under.
12. In the **Scheduled Job Options** dialog box, in **Job name**, type a name for the scheduled backup job, and then click **Properties** to set the date, time, and frequency parameters for the scheduled backup. When you have finished, click **OK**, and then click **OK** again.

If this is too cumbersome, you can simply take a couple of minutes to run Backup manually. Click on Start, All Programs, Accessories, System tools, Backup. A “wizard” will start and take you through the steps to perform a backup. The Backup utility will create a Backup file that contains all of the files and directories that you identified.

Another approach is to simply copy the files from your My Documents directory onto the backup disk. Go to “My Computer” and click “copy” the “My Documents” folder. Open a directory to the secondary hard drive or CD and “Paste”. The files will be copied. This will take somewhat longer than creating a Backup file (which is a different format) but allows you to see individual files whereas a Backup file requires you to run a Restore utility to see and restore individual files.

Where to store your backups

If you’re backing files to CD or onto a secondary hard drive, it’s best to keep your backup files in a secure location, separate from the computer. A safe deposit box at a bank works well. Or, a strong box in a separate location with other important documents. Don’t leave them in the same place as the computer – unknown events like lightning, flood, theft or other disaster would take both the computer and the backups.

How often?

It really depends on how much data you’re willing to lose versus the amount of additional work needed to back the data. I think weekly is best (for me), but many companies do nightly backups of critical data. If you don’t collect much data in a week, then monthly backups are appropriate. It’s a determine that each computer needs to make individually. But I like weekly backups, since they’re very easy to automate and pretty safe.

Summary

The amount of data we accumulate related to our business and our personal lives requires that we regularly back up data. The cost of losing the data – and the time and effort required to replace the data – is usually worth much more than the computer hardware itself. It doesn’t take a lot to protect yourself. But, it requires regular attention to the job of creating a backup.

I learned an important lesson – regular backups will save you a lot of loss in the event of a crisis. Better safe than sorry. Back up your data!

Written by Dr. Jim Quigley (17 August 2006)
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