

Mark Crootof
Final Draft
Archiving and Backup
1708 Words.

BASICS

Overview

- \$ Computerization of a veterinary practice is helpful and time-saving; however, even the slightest computer malfunction can prove disastrous. Computers are mechanical machines, and even the best built ones eventually wear out.
- \$ If data is not saved on a regular basis, the possibility of losing vital information is high.
- \$ Archiving and backup are two methods that are used to store data contained on computers and networks.
- \$ Backup, which often means partial or incremental backup, refers to the immediate storing of information on a short-term basis.
- \$ Archiving, which often includes full backup, implies a long-term storage of the same data.
- \$ Making archiving and backup a habit will protect a practice from the damage that could be caused by a complete computer malfunction.
- \$ Each practice should develop a schedule for how to use archiving and backup, which will depend on the hours and days that the facility is open.

Terms Defined

- \$ Archiving. The process of removing certain information (data) from a local database and storing it away from the computer from which it was taken. It should be easy to retrieve and restore. The most effective way to archive material is to do a full backup, and then store the information. The period of time of storage will vary and is dependent on many factors. This allows practices to protect their data should there be an ongoing, unknown problem in the system that effects partial backups.
- \$ Backup. The process of copying information from a computer's hard drive to another device. Can be internal or external and partial or full.
- \$ Compact Disc Re-Writable (CD-RW). A CD that can have new information saved on it over and over.
- \$ Bus. A collection of wires through which information is transferred from one part of a computer to another.
- \$ Digital Tape. A form of recordable media. Formerly, the most commonly used method of backup. In the last few years, many small businesses are switching to using zip disks or CD-RWs, as they are less expensive and less likely to break.
- \$ Digital Video Disc Re-Writable (DVD-RW). A DVD that can have new information saved on it over and over. It holds much more data than a CD-RW.
- \$ Full Backup. Copying all information from the hard drive.
- \$ Hard drive crash. When the hard drive of a computer fails mechanically. Sometimes only a portion of the data contained on it will be lost; sometimes all information is erased.

- \$ Gigabyte. A measure of computer data storage, roughly a billion bytes.
- \$ Megabyte. A measure of computer data storage, roughly a million bytes.
- \$ Mirroring. A technique where the data is written to two separate hard drives simultaneously. This can either be within one computer or between two separate computers.
- \$ Partial backup. Copying only a portion of the information that is on the hard drive.
- \$ Port. A interface on the CPU where computers can be connected to external peripherals
- \$ Redundant Array of Independent Disks (RAID). A category of disk drives that use two or more hard drives in combination.
- \$ Second hand drive. A device that can be used in different ways for backup of the main hard drive. It can be manually used at any time during the day, and it can be set up to mirror the main hard drive. Check with a computer consultant to assist in the setup of the latter, as this is a complex process.
- \$ Server. The computer that serves as the “main brain” for the entire computer network. Can have one or more internal hard drives that can be set up to mirror the main hard drive.
- \$ Tape backup. A recordable medium good for storage of large (20GB) amounts of information that can be erased and updated any number of times. An expensive choice, it is commonly used by large companies. With the emergence of faster, less expensive, and more durable forms of backup, tape backup use has dropped significantly.
- \$ Universal Serial Bus (USB). An external bus standard that supports data transfer rates of 12 Mbps (Megabytes per second).
- \$ Zip Drives (with disks). This is a device that comes with a reusable disk. They are popular because they are easy to use, the disks come in different sizes (they can hold different amounts of information), and they are an inexpensive backup option.

OPTIONS AND ISSUES

Thinking About Practice Backup Requirements

- \$ First, think about how much your practice relies on computer data. For example, if your hard drive crashes, how devastating would it be for your business to lose this information?
- \$ In a facility with a small system that uses computers primarily for invoicing, most of the information will also be recorded in paper files. This practice would be able to stay up and running; the malfunction would be only an inconvenience, as the staff would have to resort to writing out invoices by hand. In cases like this, only minimal backup is necessary.
- \$ In a facility with a large, paperless system, a computer malfunction without backup could prove paralyzing. There will be a significant amount of money lost, and it will take a long time for the practice to recover. In cases like this, where the potential damage is severe and the facility could be seriously crippled, it is important to consider a more sophisticated backup or a combination of different types of backup, where a second backup program automatically backups the first backup.

Simple Backups and Archiving

- \$ For many veterinary practices, daily partial backups in conjunction with regular archiving.(weekly and monthly) will be sufficient.
- \$ The most popular form of backup is to use a CD-ROM or a Zip disk at the end of each day to save that day's material. Both options are quick, easy, and inexpensive.
- \$ CD-ROMs and Zip drives can be internal (included when the computer is ordered) or external (add-ons that are bought and added at any times). The latter will just plug into the computer system, usually through a USB cable.
- \$ Another option is to make use of the automatic backup usually included in your software. For example, Microsoft Small Business has a built-in backup system that you can program appropriately. Most veterinary software companies have specific backup recommendations for their programs, and it is best to solicit their advice.
- \$ Ideally, a business should complete a backup twice a day: whether or not you take this advice depends on your facility's dependence on computer data. On the plus side, if there is a computer crash around lunch, it would take a very short time to restore that day's information. Instead of having to re-enter every chart, only the ones that have been completed since the last backup would have to be redone. On the negative side, doing two backups daily takes a little while longer, but it is usually well worth the extra time.
- \$ Regardless of how much a practice uses computers, it is important to archive data periodically. There is no set schedule for archiving. The best method is to discuss your habits with your software company. They should help you develop a schedule that takes into account the time and expense needed to perform this operation . Computer files might be archived bi-weekly, monthly, bi-yearly, or yearly, and the Zip disks, CD-RWs, or DVD-RWs should be stored in a safe, water-tight space.
- \$ It is best to store archived material off-site, in the event of a fire or other disaster. Fire resistant safes will not allow the fire inside the safe, but the intense heat will usually destroy data on disks or CDs.

Complex Backups and Archiving

- \$ Facilities that are significantly more reliant on computers for their daily operations will require a more complex backup and more regular archiving system.
- \$ For the first backup, I recommend using either a Zip drive, CD-RW, or DVD-RW, depending on the quantity of information to be stored from the day. Another option is to make use of the backup programs that are usually included in computer software. See above.
- \$ For a second backup, use a second hard drive that mirrors the primary one. When ordering a server with two hard drives, it is best to utilize a computer consultant to assist with the decisions necessary for this purchase. Be sure to backup all materials at least two times per day: once at lunch, and once at the end of the day.
- \$ Another option to consider is off-site backup. Off-site backup companies will connect to a server during off hours (after hours or during lunch) and will copy all information from the hard drive. This is a safe way to have reliant backups, but if there is a problem, these companies cannot restore your data as quickly as an on-site backup. Such companies usually charge for this service on a monthly basis, like a subscription. Although this was once an expensive proposition, competition has caused prices to drop, so it is becoming

more affordable for small companies.

\$ As above, it is necessary to periodically archive all computer files. For a practice that relies on this information, this should probably be done bi-weekly or monthly.

EXAMPLES

\$ Sample Backup Plan #1: Do a partial backup each day with a CD-RW, Zip disk, or DVD-RW. (Twice daily is even better.) You should use a different tape or disk for each day, and this should leave the building each night with a staff member. This will ensure good daily coverage for restoration in the event of a computer malfunction. Then, do a full backup each week: this will take more time, so it would be best to do this on a day when you close earlier than usual. Finally, do a full backup at the end of each month and archive it (save it separately) till the end of the following month.

\$ Sample Backup Plan #2: As above, do a partial backup on a daily basis. Hire an off-site company to take care of full backuping and archiving at night or on weekends.

MISCELLANEOUS

Abbreviations

\$ CD-RW: Compact Disc Re-Writable.

\$ CPU: Central Processing Unit

\$ DVD-RW: Digital Video Disc Re-Writable.

\$ USB: Universal Serial Bus.

References

\$ Webopedia. Available at: www.webopedia.com/ Accessed June 29, 2004. (Website with definitions of computer terminology.)

Recommended Reading

\$ Moir, Robert. Backups for Dummies. Available at www.robertmoir.co.uk/secure/Allaboutbackups.html. Accessed June 24, 2004. (Information about backing up.)

\$ News Factor: Top Tech News. Data Storage. Available at <http://www.newsfactor.com/section.xhtml?category=datastr>. Accessed June 28, 2004. (Current information about data storage).

Author

Mark Crootof, DVM
608 Rt. 29
Middle Grove, NY 12850