

## BACK UP ROUTINES

The more computer and data dependent the institution, the more important it is to make copies of data and software on a regular basis. There are a number of methods that can be used, and the selection depends upon the size of the library/information center, the amount of computer activity, and the type of services provided.

If the only data on the computer are letters and payroll records, then back up the data on floppies (other than the one that holds the data) whenever accessed, and store them off-site or in another location in the building.

If the information center uses data heavily and has large database systems, then a regular backup routine is required. A tape backup is the most effective and economical. Back up new data at the end of each day. If the data are critical or sensitive, back up the data more often. This incremental backup routine is important for cataloging operations or database tagging and input; for it takes a day to reconstruct each hour of data lost.

If the information center is hooked into a mainframe or LAN, determine how often the system is backed up and confirm that the library is included on a regular basis.

The most common method of routine backup for large scale operations is the "Grandfather" rotation. It consists of daily incremental backup routines: copying the data or files accessed or changed that day. Copy that data onto a new tape every day. On Friday, copy the entire file set. Keep that tape and store it off-site. This routine is repeated on the used tape every day for a month, keeping Friday and full backup tapes separate. Perform a full backup on the last day of the month and store as a "month end". The tapes can be kept as monthly or quarterly compilations, depending upon space and data constraints.

Ideally, only the day's data will be lost if the disaster occurs during working hours, and no data lost if the disaster occurs at night after the backup has been performed. Backup tapes should be stored in a fireproof location, either at an off-site data center or vault. Fireproof cabinets do not necessarily protect tapes because they can melt at 125 degrees Fahrenheit. The full backup tapes should be checked to make certain that the data can be read and imported should the need arise. Faulty tapes are just as bad as no backup at all.

Don't forget to make a copy of the software, both commercial and custom, and store it off-site with the data. This is important so that the data can be loaded onto another computer should the entire system be lost or inaccessible.

Establish a testing routine to upload or import data to the software. This

should be tested at least once a year, if not more often. Write out these routines in simple language in case the expert in the department is not available on the day of the disaster.

Remember that business interruption insurance does not include funds for reconstructing lost data. The insurance company assumes that data is backed up on a regular basis and is accessible, readable, and importable should it be needed. They also assume that an institution with extensive computer needs has contracted with a hot or cold site. Business interruption insurance should cover the costs of computer rental. Check the policy to confirm that it covers your computing needs.

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