Database Backup, Restore and Repair

Database Backup

Unless you are willing to re-do ALL of the work that you have done to create your databases, you must backup your files on a regular basis. This cannot be stressed enough. Ignoring this vital part of your daily work is like playing Russian roulette. You can only go so long before disaster strikes. The backup procedure that is appropriate for your company may vary from that of others, but the main idea is the same: **Backup every day**. Some companies find it easier to backup in the morning (before anyone has had a chance to get onto the system). Other companies prefer evening backup (especially at the end of a week or an accounting period) because a current backup can then be taken offsite. Whichever you choose, assign one person with the responsibility of taking the backup and verify that it is done every day. The first time that disaster strikes (rest assured that it will strike), you will be thrilled to know that you have a current backup.

Database Restore

BOOMS databases are based on the " Btrieve Record Manager". Btrieve's advanced techniques and structures allow for reliable storing, retrieving and updating of the data stored in BOOMS databases. Under normal conditions, such databases require little or no maintenance. However hardware and/or operating systems malfunctions may render all or part of a file inaccessible. In some situations, it may be advisable to restore the database from a backup media (i.e. tape). This will result in your data being "old". In other words, if it is necessary to go back to yesterday's backup, any changes that have been made today (and perhaps some that were made yesterday) will be lost. In this situation, you will need to reapply any changes that you made (e.g. add Orders, Accounts posting, List maintenance, etc).

Restoring a database involves using your backup system. Whatever that system is, someone in your company should know how to perform a restore.

Many of the BOOMS databases are interrelated. If you restore a given database, it may be advisable to restore other dependent databases (This is a major reason why "Database Repair" is preferable to "Database Restore"). In the event that a BOOMS Database is damaged (typically indicated by a Btrieve Record Manager return code of 2, 14 or 15), the following procedure should be followed:

- If you are in doubt about what to do, contact Lissan Computing Company for support. The return code may not indicate a damaged file. For example, it may indicate that a disk is full.

- If the file is damaged, "Repair" should be attempted (See below).

- If "Repair" fails (extremely rare, unless there is a hardware malfunction), the database must be restored from the latest backup. Following are restore requirements:

BSCREENS.DBF -	COPY FROM INSTALLATION DISK
BDICT.DBF -	COPY FROM INSTALLATION DISK
BSYSCAT.DBF -	RESTORE FROM LATEST BACKUP
BLIST.DBF -	RESTORE FROM LATEST BACKUP
BDATACRD.DBF -	RESTORE FROM LATEST BACKUP
BPROMO.DBF -	RESTORE FROM LATEST BACKUP
BLEDGER.DBF -	RESTORE FROM THE LATEST BACKUP (May need to redo last "G3" process)
BORDERS.DBF -	[DAMAGE TO ANY OF]
BSPECINT.DBF -	[THESE FILES MAY]
BXCHANGE.DBF -	[REQUIRE ALL OF]
BORDREXT.DBF -	[THESE FILES TO BE]
BACCOUNT.DBF -	[RESTORED FROM]
BJOURNAL.DBF -	[THE LATEST BACKUP]

Again, if you are in doubt about what should be restored, please contact LCC for assistance.

Database Repair

In almost all situations, it will not be necessary (or practical) to restore a database from a backup. Instead, the existing database can be repaired. This is possible because almost all damage caused by hardware and/or operating system malfunction only affects the database INDEX, not the actual data. The INDEX (or INDICES) is what allows rapid access to the data based on some alphanumeric or numeric sequence (e.g. promotion code, list number, order number). Repairing the file will result in the re-building of the INDEX (or INDICES) because this information is derived from the actual data.

Be aware that large files can take a long time to repair. In addition to the size factor, the time required to perform a repair is highly dependent on your operating environment and the speed of you computer. In a client/server environment (e.g. Novell Netware), you should try to run the repair from the fastest computer available. If time is a factor and the database is still partially functional, you should run the repair during off-hours (perhaps initiating the repair from a remote/home computer).

Repairing a database involves using the "BREPAIR" procedure located on the BOOMS Installation CD. This procedure does the following:

- Recovers the damaged file into a sequential (non-database) file
- Copies an "empty" database from the Installation CD to the "\BOOMS\DATABASE" directory
- Reloads the "empty" database using the data in the recovered sequential file

Database Repair Procedure

From an MSDOS prompt, switch to the drive containing your BOOMS system (e.g. "F" or "G" for a network drive) and start the Btrieve Record Manager. Following is a typical way to do this (the way that you start it may vary depending on where BTRIEVE is located):

     \BOOMS\PRODPGMS\BTRIEVE /M:64 /P:1024

     OR

     BREQUEST /D:4090

Once BTRIEVE is started, make the \BOOMS\DATABASE directory the current directory (**CD \BOOMS\DATABASE**), insert the BOOMS Installaton CD and enter a repair command of the following format (see examples on page G-4):

     d:BREPAIR   BOOMS_file   d:

   where: **d** is the drive containing the BOOMS Installation CD

     BOOMS_file is the name of the BOOMS file to be repaired (e.g. "BLIST.DBF")

     d is the disk drive containing the BOOMS Installation CD (same as 'd" above).

> ☞ The repair procedure creates a file called **BREPAIR.SEQ** that contains the sequential (flat-file) contents of the database being repaired. After the repair is complete, BOOMS does not automatically erase this file. Once you are sure that the repair was successful, you can manually erase this file or rename it for safekeeping. Repair will terminate if this file already exists (i.e. repair will not overwrite it).**IF, FOR ANY REASON, THE REPAIR FAILS, DO NOT ERASE THIS FILE! INSTEAD, RENAME IT (e.g. to BREPAIR.SAV). YOU WILL STILL BE ABLE TO USE THIS FILE FOR A REPAIR USING THE LISSAN UTILITY PROGRAM, LISSUTI**L.

See page G-4 for several examples of using the BREPAIR procedure.

Following are several examples of using repair. Note that in all cases, the current drive and directory will be the location of the BOOMS DATABASES on your system:

☞ **Example 1**: to repair database "BLIST" which is located in the \BOOMS\DATABASE subdirectory on drive "F", the following commands would be entered (installation CD is in Drive "E"):

```
F:
CD    \BOOMS\DATABASE
E:BREPAIR  BLIST.DBF      E:
```

Example 2: to repair database "BORDERS" which is located in the \BOOMS\DATABASE subdirectory on drive "F", the following commands would be entered (installation CD is in Drive "E"):

```
F:
CD    \BOOMS\DATABASE
E:BREPAIR   BORDERS.DBF  E:
```

Example 3: to repair database "BJOURNAL" which is located in the \BOOMS\DATABASE subdirectory on drive "G", the following commands would be entered (installation CD is in Drive "F")::

```
G:
CD    \BOOMS\DATABASE
F:BREPAIR  BJOURNAL.DBF  F:
```

As the repair is being done, you will receive messages like:

nnnnn Record(s) Recovered
nnnnn Records Loaded

When the repair is complete, you will be returned to the DOS prompt. The number of Records Loaded should match the number of Records Recovered. At this point enter the following command to stop the Btrieve Record Manager:

A:LISSUTIL -STOP

☞ It is important that you stop the Btrieve Record Manager if you plan to restart BOOMS at this time. This is necessary because BOOMS needs to restart the Record Manager with parameters that were not specified in this procedure. If you fail to do this, you may receive "transaction" errors from various parts of the system. If this happens, Exit (F10) from BOOMS and restart it again. This will force a restart of the Record Manager.

If it always a good idea to backup all of your data after you have repaired a database. Once you have done so, you can restart BOOMS in the normal manner for your system.