

## Method and System for Syncing Directories to RAM

This disclosure describes the use of syncing directories to RAM in order to minimize physical wear to physical disks and increase read/write speed.

### Detailed Description of Invention

The method for syncing to RAM is straightforward:

1. A RAM disk is created on RAM of the directory size.
2. The files are moved to both a backup location and onto the RAM disk.
3. Symbolic links are created from the original file location to the location on the RAM disk as well as backup links to the backup location.
4. A task is scheduled to backup the data from RAM disk to the backup location on a regular schedule based on system configuration.
  - a. This means that if the system is a laptop on battery power, it could backup more often than if, say, the system were a desktop PC.
  - b. The backing up is done using an algorithm which only replaces modified files (such as "rsync").

On system shutdown or when the program running this method is stopped, the reverse of the method is done. The symbolic links are removed, then the directory is copied from RAM back to the disk, and the backup is deleted.

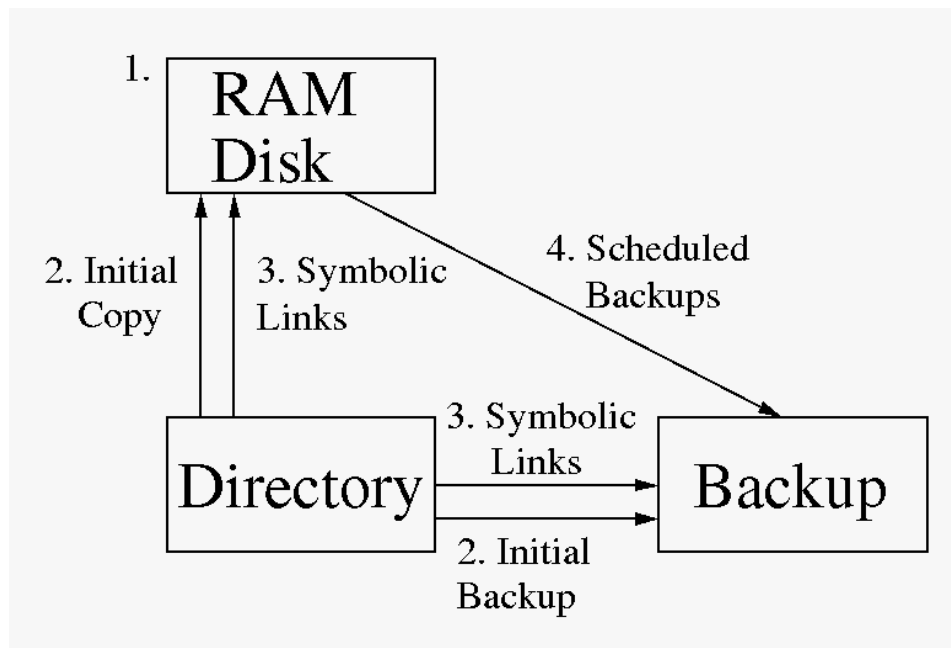


Fig. 1: Method for syncing

For the case where the program terminates before the data on RAM can be copied back to the original locations, the process is as follows:

1. Whenever the program starts, the specified directories are first checked for dead links.
2. If these exist, then the links to the backup location are used to locate the most recent version of the files and these are copied into RAM.
3. The non-backup links are fixed to match the new locations of the files in RAM.

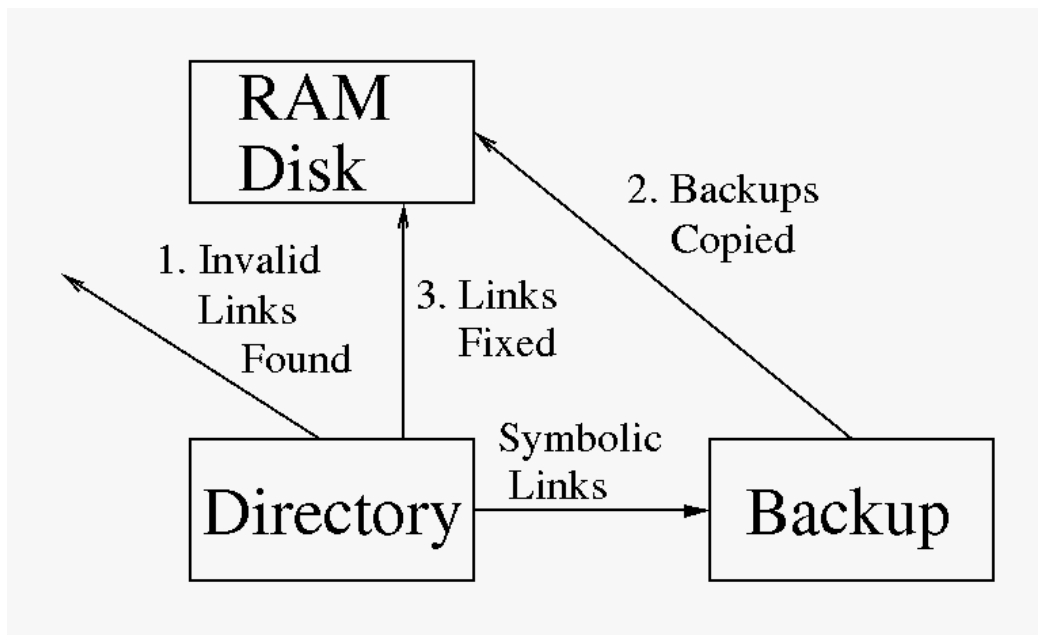


Fig. 2: Method for restoring from backup

### Example

Two or more players are playing a videogame with the terrain maps stored on one players PC. The other player accesses these shared maps over the Internet. In order to reduce lag in gameplay and less wear to his or her disk, the player chooses to keep the terrain files in RAM. He or she uses this method to keep these files in RAM and backs them up during a certain period of time for example every 120 seconds in case so that no more than two minutes of game progress is ever lost. Assuming that these files can all be updated in less than two minutes, less time is spent writing to disk.