BACKUPS Why? Where? How?

The little-known 11th commandment:
Thou shalt back up.

Why?

Protection against

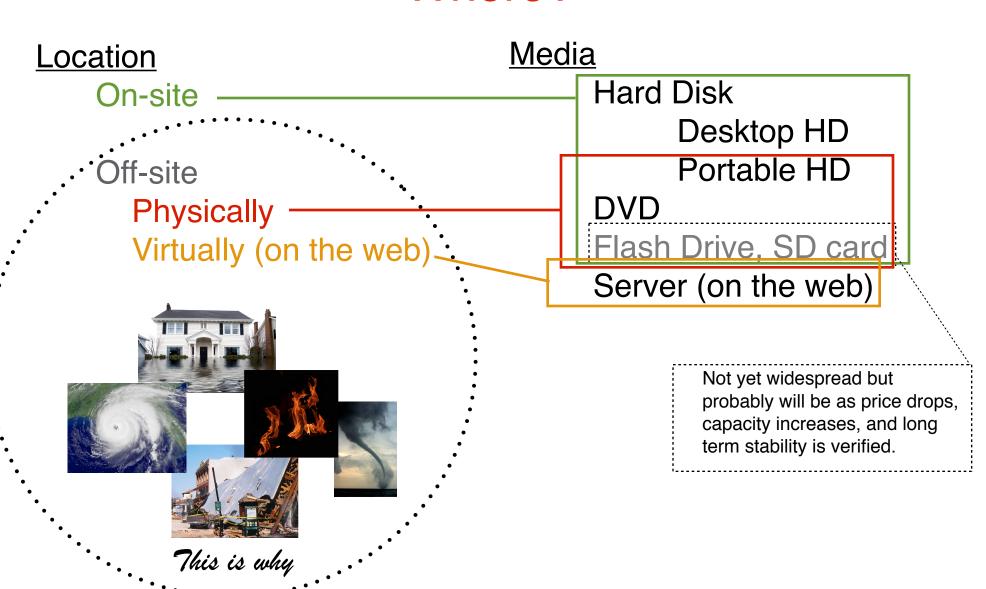## Data Loss

Work Interruption

(Drive or System Crash or Corruption)

Where?

Location   **Media**

On-site ————————————————— Hard Disk

                                                                    Desktop HD

Off-site   Portable HD

  Physically ————————————— DVD

  Virtually (on the web)   Flash Drive, SD card

                                                            Server (on the web)

This is why

Not yet widespread but probably will be as price drops, capacity increases, and long term stability is verified.

How?

Automatic (Scheduled)
> *Backup**
>> Incremental
>>> Doesn't re-save files already saved
>>> Saves <u>only</u> latest version of changed files

> *Time Machine*
>> Incremental and Archival
>>> Doesn't re-save files already saved
>>> Saves latest <u>and</u> older versions of changed files

> *SuperDuper or Carbon Copy Cloner*
>> Clone: an exact copy of internal hard drive
>>> Bootable, can start and run computer from it

*This used to be included free in Applications folder. If it isn't there, you can (a) get it free if you have a MobileMe account. Log in to Mobile me and go to iDisk/Home/Software/Backup and double-click MobileMeBackupv3.2.dmg to download the installer to your computer. (b) buy it [here](#) for $30 if you don't have MobileMe. A demo version is available to try before you buy.

How?

Manual

Finder Copy

Edit/Copy

Drag & Drop

Burn Folder

Built in Archive function in some Apps

iTunes

DVDs only

Mail

Any medium

Address Book

Any medium

Bento

Any medium

Capabilities and Limitations

Backup Application	Media	File Recovery				Drive or System Crash Recovery
		Individual Files? (1)	Most Recent	Older Versions	Restore Entire Internal HD	
Backup	Any	No (2)	Yes	No (2)	No	NA
Time Machine	Ext Hard Drive	Yes	Yes	**Yes**	Yes	Hours to Days (3)
SuperDuper or CCC	Ext HD, Server	Yes	Yes	No	Yes	**Minutes** (4)
Manual- Finder Copy	Any	Yes	Yes	If copied and kept	No	NA
Manual- App Built-In	Varies	No (5)	Yes	If copied and kept (5)	No	NA

Notes:

(1) Data files only. *Applications* use many auxiliary and hidden files, and the application will not work if simply copied from the backup.

(2) *Backup* is designed to restore the most recent version of everything in the backup all at once. It is possible to retrieve individual files, including older versions, from the backup set but it is difficult and impractical except as a last resort.

(3) Hours if the internal HD can be repaired by Disk Utility or similar repair applications. Days if it needs to be replaced.

(4) Can restart and run from the clone disk, then repair or replace the internal HD when convenient.

(5) Designed to restore the archived library or data base all at once. Difficult or impossible to retrieve individual items within it.

Additional Resources

"Take Control of Easy Mac Backups" ebook http://www.takecontrolbooks.com/backup-easy-mac
    -all most people will ever need

"Take Control of Mac OS X Backups" eBook http://www.takecontrolbooks.com/backup-macosx
    -more comprehensive, technical and detailed

Lynda.com video tutorials on hundreds of Apple topics. Time Machine is covered in Mac OS 10.5 (Leopard) Essential Training

Downloadable files "Time Machine vs Clone Backups" and "Formatting an External Hard Disk" in the AshMUG Website Handouts section http://www.ashmug.com/Page.asp?NavID=9

If you are backing up to DVDs, use high quality ones. This website has a lot of good information on DVD quality and longevity.

Setting Up or Performing a Backup

Backup   See Backup Menu/Help

Time Machine   See "Mac 101: Time Machine" http://support.apple.com/kb/HT1427

SuperDuper   See the SuperDuper user manual. This link will download it.

Carbon Copy   See the Support page http://help.bombich.com/faqs
Cloner

Note: the following procedures will work for data files, but *Applications* and cannot simply be copied. They use many auxiliary and hidden files, which must be properly installed.

Manual-   Copy:
Finder Copy   Select File(s) and/or Folder(s)
                           Edit/Copy or Command-C
                           Navigate to Destination
                           Edit/Paste

                      Drag and Drop:
                           Open 2 Finder Windows (Finder Menu/New Finder Window), one for
                               source, the other for destination
                           Select File(s) and/or Folder(s) in source window
                           Drag to destination

Burn Folder (CDs or DVDs*)
  Create a Burn Folder (Finder Menu/New Burn Folder)
   (it will be created in whatever window is active)
  Select File(s) and/or Folder(s)
  Drag to Burn Folder
   (aliases will be placed in Burn Folder; the original files will not be moved)
  Open the Burn Folder
  Note how many disks you will need at the bottom of the window
  Click the Burn button in the upper right

Manual-
Built-in Archive
function in   *iTunes*
some Apps   File/Library/Back up to disc...
     DVDs only
   Mail
    Mailbox/Archive Mailbox
    Select destination
     create a Burn Folder and select it if you want to back up to DVDs

   Address Book
    File/Export/Address Book Archive...
    Select destination
     create a Burn Folder and select it if you want to back up to DVDs

Bento

File/Backup Bento Data...

Select destination

create a Burn Folder and select it if you want to back up to DVDs