# Step by Step: Doing a Data Recovery with GetDataBack

Here's how you do everything right when doing a data recovery with GetDataBack:

**Do not write anything anymore to the drive you want to recover the data from!**
This principle is not meant to terrorize you, it's meant to preserve your data. After a data loss your data is not protected by the Operating System anymore the way it was before. The OS thinks that the space where your lost data resides is free and can be used. This means that the next copy operation, installation of programs, Internet surfing (which generates temporary files) and even booting from the drive can permanently overwrite your lost files.

## I. Setup

### I.I. Set up a Recovery Computer
Next we will describe how to set up a Recovery Computer.

Before you do anything else, do the following:

1.  If the drive you want to recover your data from is your Master/Boot-Drive (C:), then remove it from the system and attach it to another computer as a slave/second drive. We'll show you how below.

2.  If the drive with the lost data is a second or external drive (please see the chapter **I.II.II. External Drives**) you may leave the setup as it is. Please jump to **II.I. Install GetDataBack**.

3.  If your drive is a laptop or notebook drive, please go to section **I.II.I. Laptop Drive.**

### I.II. Remove the drive and attach it as a slave drive
If you haven't installed a drive before, please follow these easy steps.

1.  First of all - shut down your computer and unplug the power cable. You then need to open your computer casing, that's just a few tiny screws. You'll see your hard drive connected to the IDE cable and a power cable. You will probably need to unscrew a few more screws to free your hard drive. Then unplug the drive from the IDE cable and the power cable. That's it. Take the drive and install it to another computer.

    You have two choices:

    - If you have another working computer, just install the drive as a slave drive to this one. Please be aware that you have to have enough free space on the hard drive of this computer to copy the recovered files to. Of course you can use a friend's computer for this - make sure your friend is okay with you coping all your recovered data to his drive.

    - If you don't have a second working computer, you can also set up your old system as the Recovery Computer. Just get another hard drive with enough space to later hold the recovered data and install any Windows OS on it. Make this drive the Master/Boot drive of your computer and attach the "problem" drive as a slave drive.

2.  Install the drive as a second/slave drive. You first need to jumper the drive as a slave drive. There are little pins on the small side of the drive, which you have to set to the right position for slave/second according to a chart that's usually on the drive. All you need to do then is to plug the "problem" drive into the second slot on the IDE cable. It also needs power, make sure to connect it to one of the red/yellow/black power cables.

3.  Now plug the main power cable back in and start up the Recovery Computer. Make sure that the second drive is detected. Check this in Windows Disk Management. To get there click Start>Control Panel>Administrative Tools>Computer Management>Storage>Disk Management. If your drive doesn't show up here, the drive is either physically damaged or not installed correctly. If you know or suspect that the drive is broken, you need to send it to a data recovery lab. Otherwise, check the cabling and make sure the drive is jumpered as a slave drive. If that doesn't help, take the computer to a local computer store and ask for help.

**I.II.I Special - What if your drive is a Notebook/Laptop drive?**
If you need to recover data from a Notebook or Laptop drive, you can either

1. Remove the drive from the Laptop/Notebook and attach it to the IDE-cable of a Desktop computer. You'll need to find out how to remove the drive from your computer, normally with modern Notebooks/Laptops the drives are removable and it's just a screw or two to get them out. Don't forget - always power down your computer before you remove hardware. As soon as you've managed to remove the drive you'll need a Notebook-to-IDE-adaptor which you can get at any computer store for under $15. Jumper your drive as a slave and connect it via this adaptor to any Windows computer.

2. An alternative is to create a WinPE/BartPE boot disk and run GetDataBack from there. This is more complicated, but works just as well and is an option if you cannot remove the drive from the Notebook. Please be aware that later on you need sufficient space on another drive to copy the recovered data to. This can for example be an USB-Drive that you attach to the Notebook or a Network drive. You'll find detailed information on how to create a WinPE/BartPE boot disk on our website at http://www.runtime.org/peb.htm.

3. A simpler option is booting the Notebook from our ready-to-use Runtime Live CD. This CD-ROM has GetDataBack preinstalled. You can download the ISO image from our Website at http://www.runtime.org/data-recovery-live-cd.htm.

**I.II.II. Special - External Drives**
External drives, like for example USB-Drives, can be recovered with GetDataBack just like internal drives.

However - scanning the drive for your data takes much longer when performed through USB, especially when using USB1. The scan can be up to ten times longer, so while scanning a 100GB drive normally takes about 2 hours, it can be up to 20 hours through USB. If at all possible, remove the drive from its casing and attach it directly to the IDE-cable of your computer. If you are afraid that unwrapping the drive is going to void its warranty, leave everything as it is and be patient.

## II. Installation

**II.I Install GetDataBack**
The hard work is behind you. Now that you've set up your Recovery Computer, download the free demo version of GetDataBack from our website. There are two versions: GetDataBack for FAT recovers data from FAT-formatted drives, GetDataBack for NTFS recovers data from NTFS-formatted drives.
If you don't know whether your drive was FAT or NTFS, here's a little guide which product you need:

If the Operating System on your "problem" drive was Windows 95, 98, ME or you are dealing with a Compact Flash Card, USB-Stick, an external drive which you never formatted or a floppy disk, the file system is most likely FAT and you'll need GetDataBack for FAT.

If the Operating System was Windows NT, 2000 or XP the file system probably was NT and you'll need to use GetDataBack for NTFS. Please note: XP uses both file systems, so with XP it can be both FAT or NTFS. Drives larger than 32 GB are NTFS most of the time.

If you're still not sure which version you need: It doesn't hurt just to try either GetDataBack for FAT or NTFS, you're not going to damage anything by using the wrong version. If after the scan in Step 2 of the software you don't see any useful file system entries, simply start over and try the other version.

Install GetDataBack on the Master/Boot (C:) drive of your Recovery Computer.

## III. Running GetDataBack

Start GetDataBack by clicking on Start>All Programs>GetDataBack.

### III.I. Welcome Screen

The first screen will look like this:
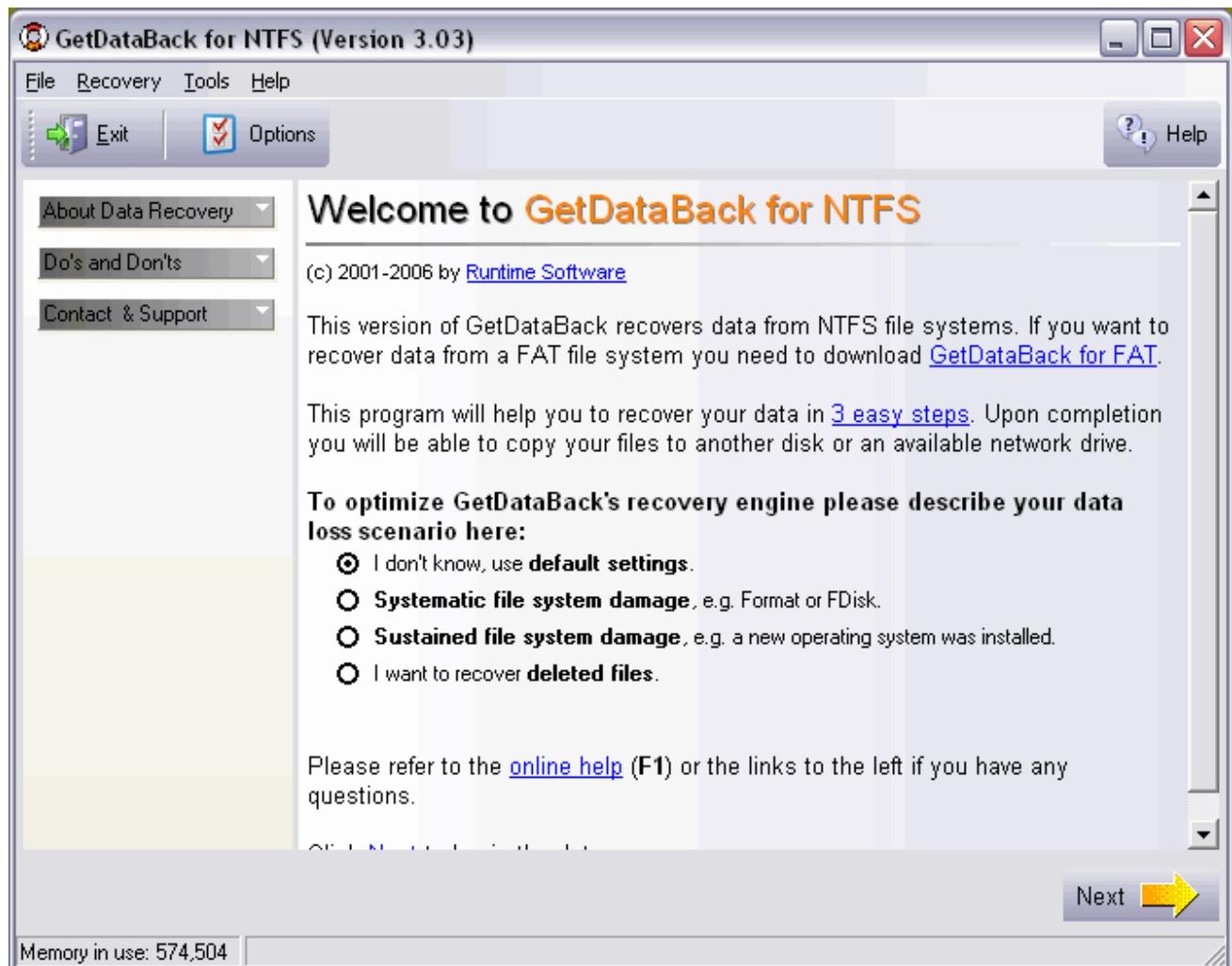


### III.I.I. Intro Screen

The only decision you'll have to make here is to pick one the data recovery scenarios. Read through the choices carefully and then choose the one that most applies to your situation. Don't hesitate to go with the standard options if you're not sure what happened to your drive. The standard options are the recommended settings for most recoveries and more often than not they will produce the optimal recovery results.

Press Next.

**III.II. Step 1 - Select Drive**

Step 1 will look like this:
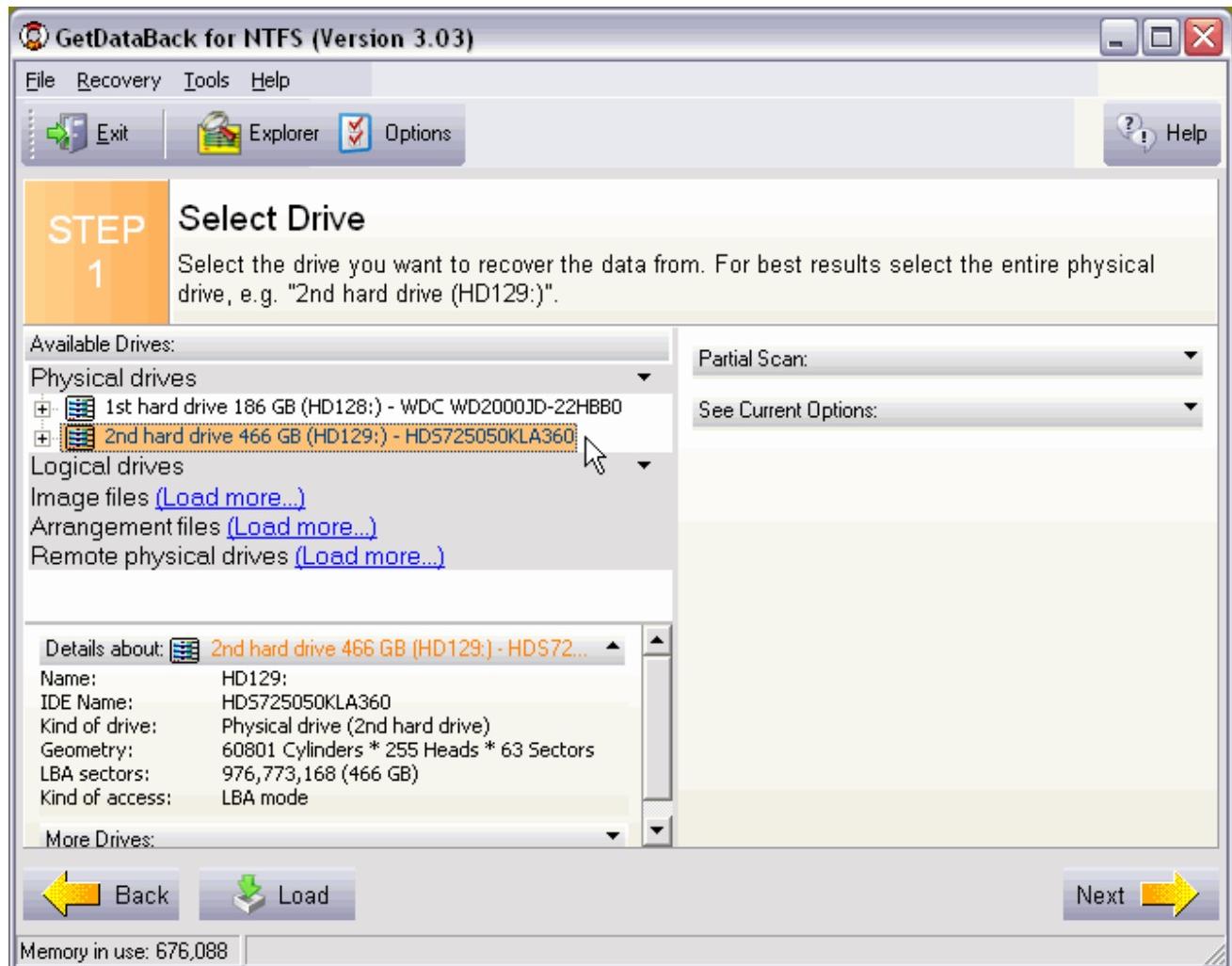


*III.II.I Step 1 Screen*

On the left hand side of Step 1 you'll get a list of all the drives that are accessible in your system. Now you will select your "problem" drive from this list. If you attached the drive as a slave drive as explained above this will be the entry "2nd Hard Drive (HD129:)" or if you had more than one hard drive in the system already it could be the 3rd, 4th or so hard drive. It shouldn't be "1st Hard Drive (HD128:) because that would mean the drive you want to recover the data from is still set up as the boot drive.

Select the drive you want to recover under **Physical Drives**. Choose the entry under Physical Drive over any ones under Logical Drives - this will usually yield the best result.

There is usually no need to change any options manually in the Options tab on the right hand side. Refrain from changing any settings in Partial Scan - this feature is for experts only and will not improve your recovery results.

Press Next.

**III.II.II Scanning the Drive**

GetDataBack will now scan your drive for every available information regarding the original file system. The scan will take some time, you should at least allow an hour of scanning for every 50 GB of drive capacity.

However - if the scan takes much longer than this, there is something wrong. It is normal if the scan is not completed within a couple of hours.

There are the a couple of reasons why the scan can take very long:

1.  Your drive has a **physical problem**. If the drive has a lot of **bad sectors** (damaged areas on the drive's platters that cannot be read anymore) or is otherwise damaged, the scan can take really long if it's ever going to finish.

    If you get only an occasional bad sector message, but the scan is otherwise progressing, choose "Ignore" in the warning windows and let the scan finish.

    But if you receive a lot of read error messages, or the scan seems to stall or is taking forever, your best bet is to stop what you are doing and to make an Image of your damaged drive first. By making an Image you will reduce the stress on the drive (which if physically damaged can fail at any moment). Once you have created the Image you can perform the data recovery for the Image instead of the drive - just select the Image you made in Step 1 of GetDataBack (Image Files). You can use GetDataBack to make an Image, the only other thing you'll need is enough space on another drive to store the Image to. Instructions on how to create an Image are on our website at http://www.runtime.org/gdbimage.htm.

2.  You are scanning an **external drive** through the USB port. Scanning a drive through USB takes much longer than scanning a drive that is connected to the internal IDE-cable of your computer. In extreme cases the scan can take 10 times longer, especially when using USB1. Consider taking the drive out of its casing and attaching it directly to the IDE-cable. See chapter **I.II.II. External Drives** above.

**III.III Step 2 - Select File System**

In Step 2 you will see:
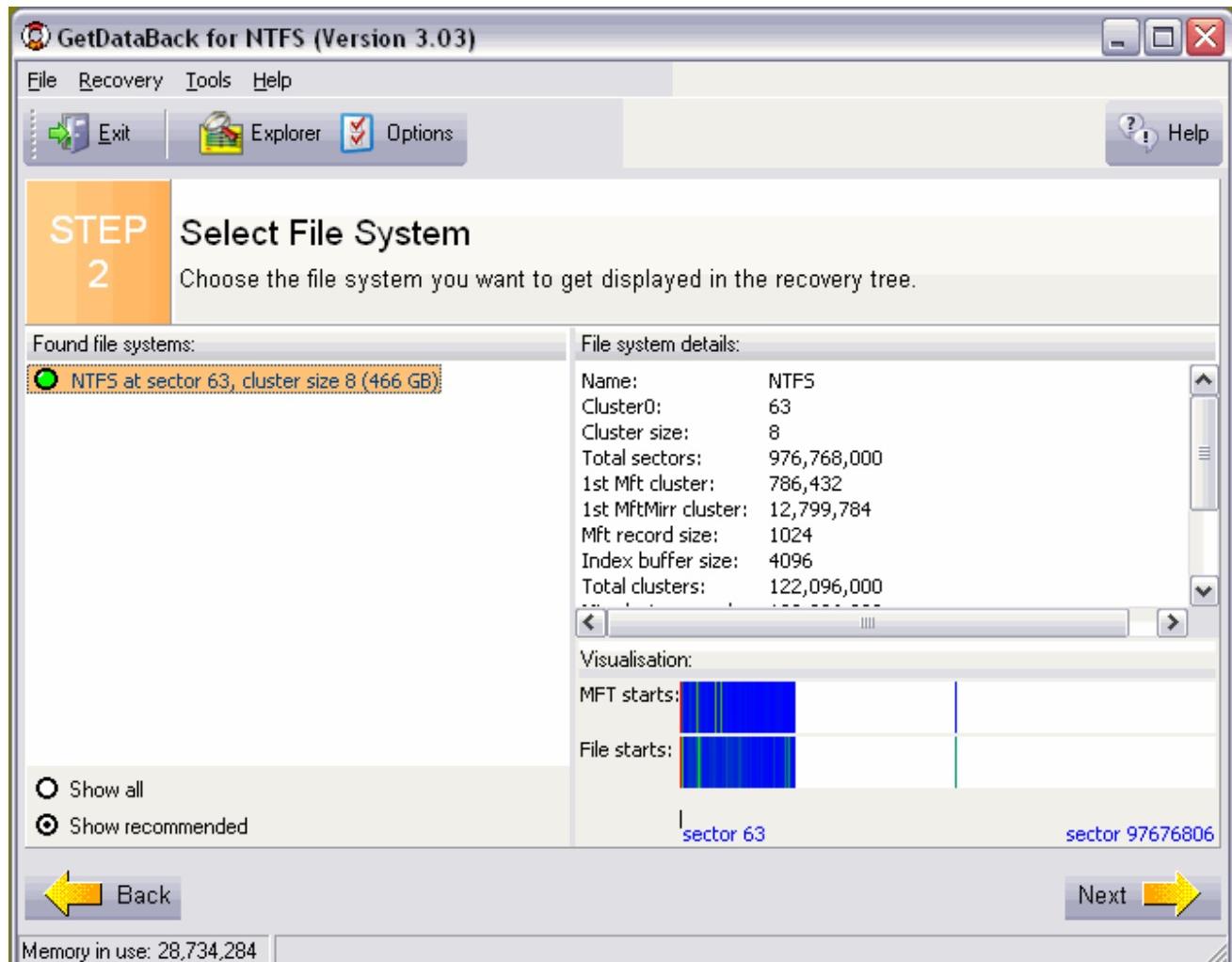


*III.III.I Step 2 Screen*

On the left hand side of the screen you will see a list of the possible file systems GetDataBack has found. Don't confuse the file system entries with the list of files and folders you are hoping to recover - you will see those in Step 3 of the software.

Each entry represents a (possible) partition on the drive. If you had more than one partition on the drive which you need to recover (for example logical drives C:\ and D:\) you will probably have to go back and forth between Steps 2 and 3 and select the corresponding entries separately in order to recover all files.
Please note: If you had both FAT and NTFS partitions that you need to recover on the drive, you will have to run both versions of GetDataBack, GetDataBack for FAT first and then GetDataBack for NTFS or vise versa.

The file system entries are constructed by file system information GetDataBack has collected during the scan and that the software will use to reconstruct the file system that was originally on the drive and holds the required information about the location and content of your files. By default the most accurate file system entry is automatically on top of the list, so for the moment don't be too concerned about the other entries or the entries that you get when you expand the list by selecting "Show all".

On the right a detailed description of the found file system is displayed. This information is primarily used by our tech support staff.

So select the first entry in the list and press Next.

**III.III.II No entries in Step 2**

If you do not see any entries in Step 2 this can be for the following reasons:

1.  You didn't select the **whole physical drive** in Step 1 of the software.
    If you select only part of the drive, select only a partition or restrict the area to be scanned by doing only a partial scan, GetDataBack in some cases will not be able to reconstruct the **original** file system or will just not find enough information to rebuild any file system at all.

2.  You are using the **wrong version** of the software.
    GetDataBack comes in two versions. You need GetDataBack for FAT if the original file system, i.e. the file system that was on the drive when you lost your files, was FAT and GetDataBack for NTFS if the original file system was NTFS. If you are not sure which file system your files were formatted with, read chapter "Install GetDataBack" again. You may also send our technicians a snapshot of your recovery from Step 2 - they can easily determine if you are using the wrong version. To create a snapshot click on Help>Snapshot for Support while in Step 2. This will create a small text file with detailed information about the options you chose in the software. Email this file to support@runtime.org.

3.  Your drive is **physically damaged** and GetDataBack is unable to read enough sectors on the drive to gather the required information.
    If you were getting a lot of error messages during the scan or you already know that your drive has a physical problem, if might be too damaged for you to be able to recover your data with software. You might have to send your drive to a data recovery lab. Please contact our tech support - they will help you determine if this is the case.

4.  You are scanning an **external drive**.
    Since you don't have error checking when scanning through USB, possible errors while reading the drive are not reported to GetDataBack. It then can happen that the software is unable to read the necessary file system information and cannot collect enough information to come up with a file system entry. It's best (and much quicker) to attach the drive directly to the internal IDE-cable. Please see above **I.II.II. Special - External Drives**.

**III.IV. Step 3 - Recovery Tree**

Step 3 should look like this:
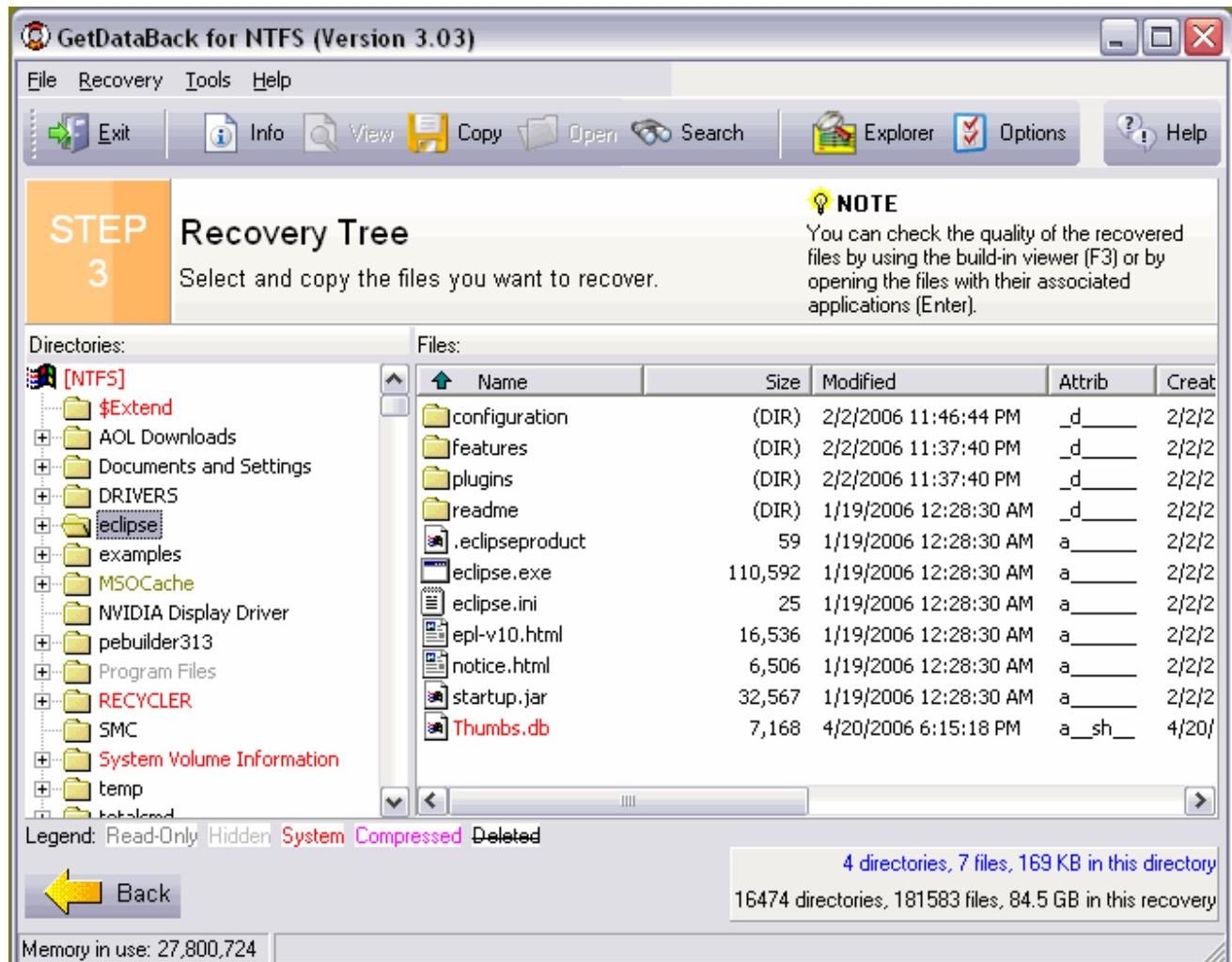


*III.IV.I Step 3 screen*

The screen will remind you of Windows Explorer. On the left side of the screen you see a tree of recovered directories and folders and a folder called "Lost files" created by GetDataBack, containing the files without directory information.

When you open a folder on the left side, the files in this folder are displayed on the right side.

First have a look at the left side. Does the directory tree look familiar to you? Do you see the folders that were on the drive you want to recover the data from? Does it seam that the directory structure is complete for this partition?

Now open up a folder that interests you on the left side and look on the right side. Do you see the files that you expect to be in this folder? Do you see the correct file names and does it appear that the files are all there?

Now open up a few files in order to test them. The fact that you see the folders, files, file names, the right file size etc. is a good sign, but doesn't necessarily mean that the file content is there and that those files will be usable. You will not be able to test huge files or files that need to be imported correctly into their native application, like for example Outlook PST-files.
Select files that are easy to check - for example Word documents (*.doc), pictures (*.jpg), graphics (*.gif). Open these files by double-clicking them or by using the build-in file viewer (F3). Please note: To open files by double-clicking them (for example Word documents with MS Word) their associated application needs to be installed on the Recovery Computer.

Do the files open fine, meaning you can see the file content, the text, picture etc.?
If so, repeat the same process with a couple of more file in different folders.
If all or at least the majority of files open okay, your recovery is looking good.

In order to actually save your recovered files you will need to copy them off the "bad" drive to another location. This can be a location on the Recovery Computer's Master drive, any other drive attached to this computer, a USB drive or you can copy the files to a network destination. Make sure this location has enough free space for all the files you need. **Never** copy the recovered files back to a location on the drive you just recovered them from (the "bad" drive), or you will overwrite them and they will be gone forever!

You may copy either selected files and folders by tagging them on the right side or the whole thing by selecting the top entry on the left side that says [FAT] or [NTFS]. Select the files/folders/volume you need and press the copy button or **Recovery>Copy** on the main menu.

To enable the copy function and to save your files you will need a license key for the software. You can purchase a license key online 24 hours a day on our website at http://www.runtime.org/buy_now.htm. You will receive the license key to your email address and on a confirmation screen within minutes after submitting the order form. If you prefer not to order online, give us a call during office hours or send us your order by fax. You do not have to run the software again - just enter the license key at any time in the demo version of GetDataBack. Go to Help>Register in the main menu of the software and enter your registration name and key there.

Now copy over your files. As soon as the copy operation has completed (which can take quite some time depending on the amount of data and the speed of your computer or network connection), make sure that all the files you need arrived safely on the destination drive. Do not at this point recycle your "bad" drive or format it or reinstall a new operating system. Keep the drive in its current state until you're absolutely sure that you salvaged all the data that you need. Only then you should you decide whether or not you want to rebuild the system on this drive (reformat it, reinstall Windows and your other programs etc., copy back the recovered data to this drive). Never reuse a drive that has any physical problems, any bad sectors or a drive where you're not sure why the data on it became suddenly inaccessible.

### III.IV.II Problems & Troubleshooting

1. What if you don't see your files and folders in Step 3?
   If you don't see the files you are looking for or only part of them, the first thing to try is to go back to Step 2 and one by one try other file system entries (if there are any). If you still cannot find your data, send us a snapshot of your recovery along with a short description of what happened to your drive. You create a snapshot by clicking on Help>Snapshot for Support while in Step 3. This will create a small text file with detailed information about the options you chose in the software. Email this file to support@runtime.org.

2. What if all you see on the left side is a list of numbered directories, but no or little directories with real names?
   The directory structure of your drive could not be recovered. That doesn't automatically mean that the files and file names are unrecoverable. Look into the directories - if you're lucky at least the subdirectory names and file names are intact and the files will open just fine.
   You may also go back to Step 2 and try other file system entries or send us a snapshot of your recovery. Please see above (1.) how to do that.

3. What if you see a bunch of files and folders, but the specific file(s) you are looking for are not there?
   Search for your files - maybe they are hidden in some directory where you wouldn't expect them. To search for files click on the Search button and enter the file name, part of the file name or the file's extension into the search mask. If you're still unable to locate the data you need, go back to Step 2 and try other entries or send us a snapshot of your recovery (see above).

4. What if you see your folders, files, file names - even with the right file size - but when you try to open a file to test it, it either won't open at all or all you see are weird hex characters instead of your file content (text, picture)?
   There is something wrong with your recovery at this point and you won't be able to recover your files like that. First go back to Step 2 and try other file system entries. If that doesn't help, please send us a snapshot of your recovery from Step 3 (see above).