

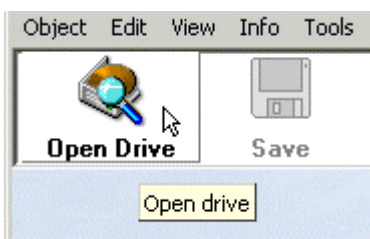


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## ▶ 1. The very first start

If you are trying to recover data from a removable media, you need to have the media in the drive before running URGENTRECOVERY. Before running the program under Windows NT-based environment, make sure that you have administrator privilege.

Once the program is loaded, you may choose your language. Afterwards a wizard appears leading you through the recovery process. This guide will explain an advanced, manual recovery procedure to you. Hence you can close the wizard and select Open Drive from the button bar.

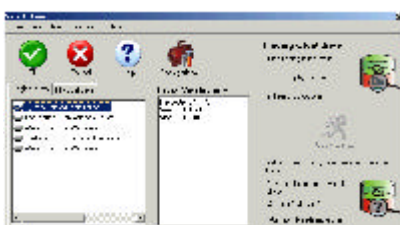


The drives of your computer will be detected. If the scanning window will not disappear after a certain time, a complete lookup causes your computer to crash because one drive may be incompatible with the software and you can omit it by restarting the software and selecting Options from Object menu.

The appearing window will display a list of all accessible drives found on both Windows logical drives and physical drives in your system. If your drive is listed under 'Logical drive', select your drive which contains the deleted files or directories.

☛ If the drive containing the deleted files your are looking for is not listed, this is a sign of more severe corruption and you may need to proceed with the next step Finding an existing or lost drive.\*

☛ If the drive your are looking for is listed, but the filesystem format is wrong, you should select it and click 'Full scan/ find format'.\*



NOTE: If you select a drive that uses the FAT system, you can choose the FAT number to be used for the program (used for accessing directories) if you click on 'Scan options ->

Drive Access'. In most cases the option "FAT 1" is correct.

Select 'no FAT' if you accidentally reformatted your drive. Select 'FAT 2' if you know that your first FAT is damaged.

For more information on recovering files on a specific file system refer to File System Issues.

After selecting OK the drive will be searched for deleted files and directories (only if the selected drive uses NTFS system). After the search is complete the user interface appears. Proceed with section user interface.

## 2. Finding an existing or lost drive

If your drive is not listed under 'Logical drive', URGENTRECOVERY must search for your lost drive. The following sequentially (sector-by-sector) search process can be adjusted to accelerate processing speed and to reduce memory usage. Please notice that it is very recommended on computers with low memory (< 192 MB) to switch off all of the following options that are not needed. The search options can be accessed if you click on Scan options. If you keep the default options, the maximum possible data will be found, but the search will require more time to complete. These are the options for the drive scan process:

### Find FAT drive data

If enabled, FAT drive data information including files and directories will be found. This is the preferred method if the drive's boot sector or other important drive information is damaged. Found drives of this type are named as "rebuilt" in the logical drive list.

### Find NTFS drive data

If enabled, NTFS drive data information including files and directories will be found. This is the preferred method if the drive's boot sector or other important drive information is is damaged.

Found drives of this type are named as "rebuilt" in the logical drive list.

### Find lost files (raw data)

If enabled, lost files will be searched by a file signature search algorithm. This is the preferred method if your drive is severe corrupted and no directory or file information is found. This is a last resort in recovering data from a severely corrupted drive.

This option will typically recover small files that are stored in one cluster or larger files stored in consecutive clusters on the disk. The lower your drive is fragmented, the more effective the result will be.

The size of these files can not always be determined properly. Therefore the signature search algorithm has a maximum file size. If you need to recover large files (i.e. videos or bigger database file) you should set this size to their estimated size.

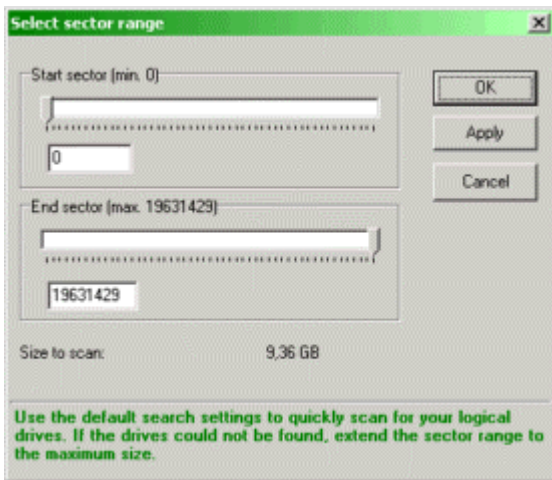
If you check 'Find Office files in .MOF Lost files', URGENTRECOVERY tries to recognize the extension of recovered files using the OLE Storage format (used by all Microsoft Office files and many other third party vendors).

By checking 'Find MPEG audio (MP3) in Full Scan' the signature search algorithm additionally searches for MP3-files. Analogous 'Find MPEG video+audio (MPEG1/2) in Full Scan' the MPEG1/2 video format, mainly used on DVD-/VCD-/SVCD-media, will be detected.

If drives of this type were found, they are named as "RawFS" in the logical drive list.

For more information on recovering lost files refer to File System Issues.

Before starting the search select a physical drive under tab sheet 'Physical drive' which contains your lost drive. After selecting Quickscan the following window will appear.



This dialog window allows you to delimit the search. In most cases the default setting can be retained. Click on OK to start the search.

After the search has completed (or canceled by the user), the additional found drives will be listed under 'Logical drive' and marked as . Depending on the extent of the disk corruption there can be found the following drive types:

Drives with lost boot sector (marked as "lost")

If the drive you are looking for is still not listed you should repeat the previous step by

clicking 'Full scan/ find format'. After completion of the scan, additional drives of the following type can be found:

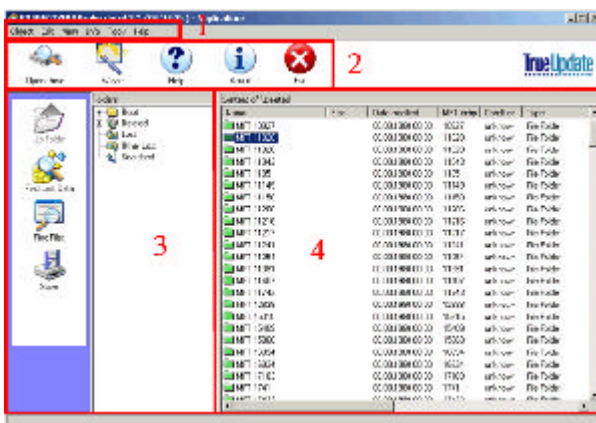
- Drives without boot sector (marked as "without BootSec")
- Drives without boot sector that were rebuilt in memory with files and directories found during search (marked as "rebuilt")
- Drives without any drive information (marked as "RawFS")

For more information on recovering lost files refer to File System Issues.

This list is sorted from a very good resulting recovery to a less good resulting recovery. Select your drive and click on OK. The drive will be searched for deleted files and directories (only if the selected drive uses NTFS system). After the search is complete the following user interface appears.

### 3. The user interface

The user interface of the program is as follows:



Below the program title there is the menu bar (1). Further below there is the button toolbar (2) from which the most important points of the program can be accessed. The directory tree (3) and the file list view (4) are used to navigate through your drive.

The parts of the program are now described in detail:

#### The directory tree

The directory tree contains as highest

elements the folders Root, Deleted and Searched.

**Root** 

contains the directory structure including normal (not deleted) files and directories as it would be displayed by any other file browser

**Deleted** 

contains the directory structure including deleted files and directories

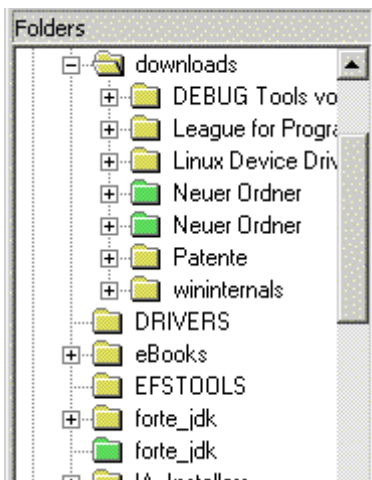
**Searched** 

displays the result of a user file search operation



**Lost** 

displays the result of a find lost data operation

Each folder contains a directory tree of the following form:



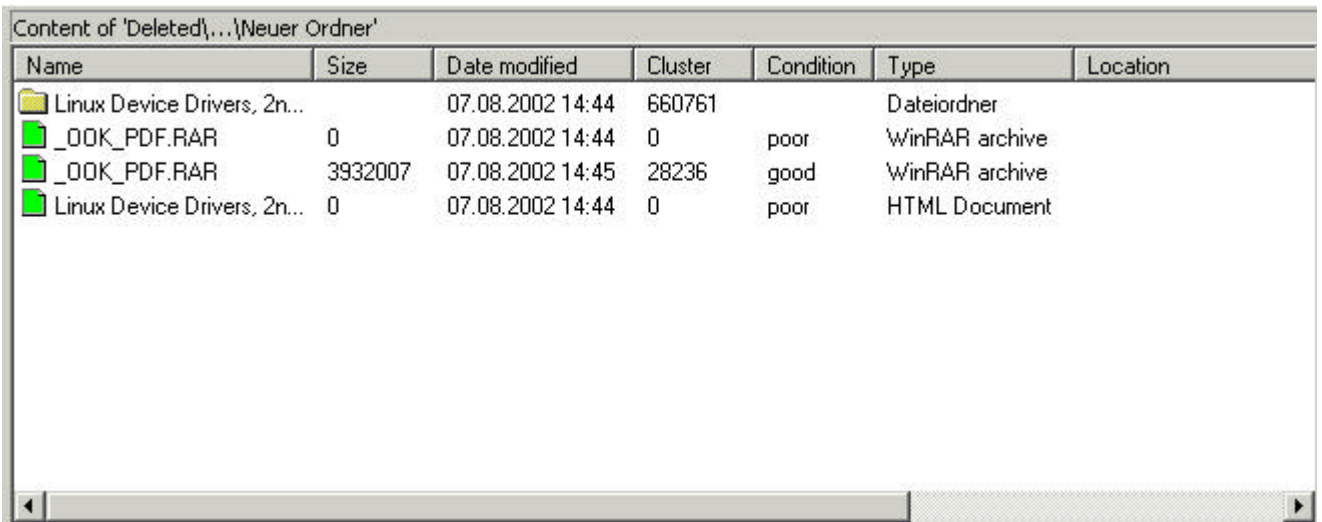
The drives directory structure contains the folders of the drive and you may click into directories as you would do with Windows Explorer.





Once a directory is selected the file list view at the right will show all files and directories of the selected directory. Deleted folders are marked as . Existing folders are colored yellow 

**The file list view**

Once you click on a folder in the directory tree a list of files



and directories will be displayed in the file list view at the right:



| Name  | Size    | Date modified    | Cluster | Condition | Type           | Location |
|---|---------|------------------|---------|-----------|----------------|----------|
|  Linux Device Drivers, 2n... |         | 07.08.2002 14:44 | 660761  |           | Dateiordner    |          |
|  _OOK_PDF.RAR                | 0       | 07.08.2002 14:44 | 0       | poor      | WinRAR archive |          |
|  _OOK_PDF.RAR                | 3932007 | 07.08.2002 14:45 | 28236   | good      | WinRAR archive |          |
|  Linux Device Drivers, 2n... | 0       | 07.08.2002 14:44 | 0       | poor      | HTML Document  |          |

The following information will be shown in the different columns:

 **Symbol**

Used to distinguish existing and deleted files. Existing files are marked as  and deleted as .

 **Name**

Name of the file or directory. The file name may have a "\_" as the first symbol. This first character can be changed for all files by selecting Options from Object menu. The entire individual filename can be changed by selecting Rename from Object menu or by using the popup menu.

If multiple files were found with the same name it is always the best practice to change the file names before saving them.

#### **Size**

The size in bytes (1024 bytes=1 Kilobyte). The size can be modified by selecting Properties from Object menu. The default size for lost files can be changed by selecting Options from Object menu and choosing tab sheet 'Files'.

#### **Date modified**

Fast time the file was changed, updated or edited

#### **Cluster**

The cluster where the file begins on a FAT system

#### **MFT entry**

The MFT (master file table) entry on a NTFS system

#### **Condition**

The condition of deleted files/directories. May be either poor (the file cannot be recovered at all), fair (a part of the file may be recoverable), good (the entire file may be recoverable) or unknown.

#### **Type**






Description providing detailed information about the type of the file

#### **Location**

Location of the file. If the file or directory has been discovered by a user search, the location will indicate the original folder location.

### Sorting after specific criteria

The items in the file list view can be sorted by column. Simply click on the header of one column to sort for the specific criterium the column describes. To change the sorting from ascending to descending and vice versa click again the same column header.

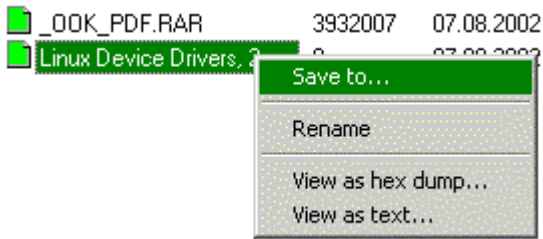
| Content of 'Deleted'   |         |                  |         |
|--|---------|------------------|---------|
| Name   | Size    | Date modified    | Cluster |
|  Neuer Ordner |         | 20.08.2002 16:59 | 1099    |
|  Neuer Ordner |         | 20.08.2002 17:13 | 1099    |
|  _ALES        |         | 20.08.2002 16:59 | 1099    |
|  BUSINESS     |         | 20.08.2002 17:13 | 1099    |
|  _S.3         | 1452651 | 14.07.1994 12:23 | 2       |

### Changing type of view

If there are many items in the file list view you can display them as list, as small, or as large icons. To change the type of view choose the desired option from the View menu.

### The popup-menu

Most actions for recovering can be accessed from the popup-menu. This appears if your right click a selected file or directory:

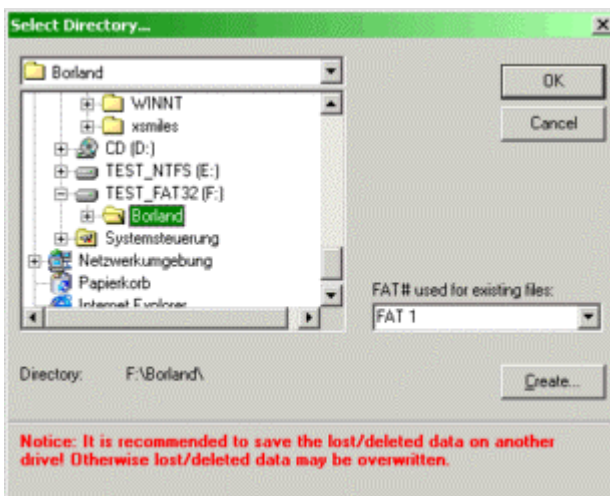


#### 4. Recovering lost or deleted files

Once a drive has been opened and the file has been found in the file list view, select the file you wish to recover. To select multiple files either use the Shift key (to select several files in succession) or the Ctrl key (to select individual files) of your keyboard. If you wish to select all items in the file list view choose Select all from Edit menu.

Select "Save to..." from Object menu or click on the save button in the toolbar. Alternatively, if you select a single file you can choose "Save and view..." from Object menu to first save your file and then view it with the software applicable to the type of the file recovered.

The following window will appear:



Now select the drive and folder for the destination of the file to be recovered. This destination can either be another hard drive, a local network drive, a Zip or Jaz drive, or a floppy drive. Please notice that it is very much recommended, never to save the files to the drive or partition you recovered the data from. Otherwise other lost or deleted data could be overwritten.

If you wish to create a new directory, select the "Create..." button and select OK.

**NOTE:** If the file is recovered from a

FAT system, you can choose the FAT number which should be used for existing (normal) files. In most cases the default option is correct. Select 'no FAT' if you accidentally reformatted your drive. Select 'FAT 2' if you know that your first FAT is damaged.

For more information on recovering files on a specific file system refer to File System Issues.

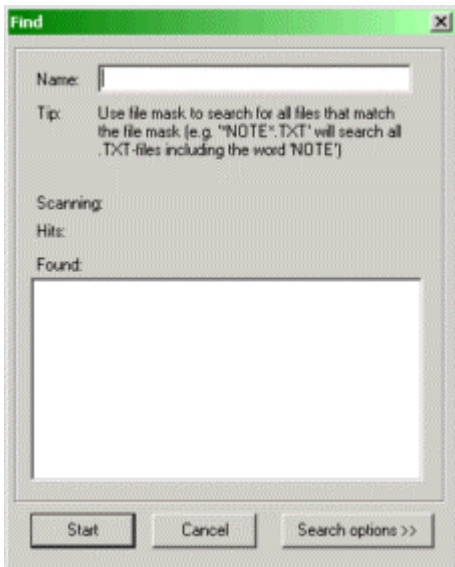
#### Recovering multiple directories and files

It is not recommended to save the contents of an entire drive in one operation. The reason for this is, that many files and directories with the same name may be found (there may also be deleted files and existing files with the same name). To speed up recovery time and insure a system that works well, the suggested method of recovery is to retrieve your own data files (documents, sheets, drawings, images, database files, etc.) and re-install any software applications.

## 5. Finding lost or deleted files

With many of files and directories to view, finding a particular file in a tree display can be difficult. The find option makes finding files your need much easier. If you know the name, extension, time, date, size or type of the file you are looking for, you can search the entire drive for a specified file or files with this option.

Once a drive has been opened you can search your deleted file by selecting Find from Object menu. The following window will appear:



If you are looking for files of a specific name, you can enter a file filter string. The search is very flexible allowing multiple wildcards within the search. The wildcard character are the '\*' and '?' symbols. The '\*' can replace a file name, parts of a file name or a file extension. The '?' can replace a single character in a file name or extension. In the following there are some examples of wild card searches.


NOTE: When using this option it is important to remember that deleted files may have the '\_' symbol as first letter on FAT systems. Therefore it is usually best to leave out the first letter of the file name to be searched.

Examples:

| you are looking for:   | Use this:       | You get back:   |
|--|-----------------|---|
| All files named "mybusiness" with multiple extensions.                   | mybusiness.*    | Mybusiness.mdb, mybusiness.doc, mybusiness.xls or any other file named mybusiness regardless of the extension                                   |
| Files named "mybusiness1.doc", "mybusiness2.doc", "mybusiness3.doc" etc. | mybusiness*.doc | The search will return all files starting with "mybusiness" with the .doc extension. So you will get "mybusiness1.doc", "mybusiness2.doc", etc. |
| If you are looking for files containing the word business.               | business        | All files containing business, for example "monkey_business.doc" "business_funny.xls", "noneofyourbusiness.ppt", "mybusinessonly.mdb".          |

### Advanced search options

The advanced options allow you to search files by date, type and size. Click on Search options, select a search option and click on Start to begin the file search.

Once the search has finished, the found files can be found in the  **Searched folder** of directory tree. To recover a searched file proceed as described in section Recovering lost or deleted files.

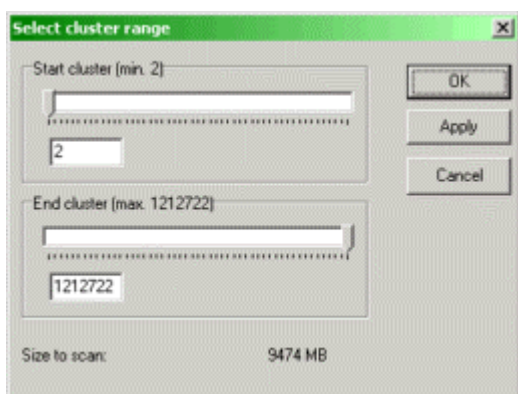
If you know you are using the right drive and you have performed this file search but your drive does not contain the entire files/directories, there may be lost files on your drive. Therefore proceed as described in the next step "Finding lost data".

## 6. Finding lost data


If you know you are using the right drive and you have performed the user file search but your drive does not contain the entire files/directories, there may be lost files on your drive. A very typical -but not limited to- case would be if you accidentally formatted or reinstalled your drive.




After selecting Find lost data from Tools menu, the following window will appear.



This dialog window allows you to limit the search to a particular range of the current drive. In most cases the default setting can be retained. Click on OK to start the search.

After the search has completed (or canceled by the user), the found files can be found in the  Lost folder of directory tree. To recover a searched file proceed as described in section Recovering lost or deleted files.

If you did not disable the "find lost files" option under menu "Object/Options/Scan options", there will be also detected lost files by a signature search algorithm. These files can also be found in the  Lost folder of directory tree below the directories found. If the file size of these lost files could not be detected, they will have the default size specified under menu "Object/Options/Scan options ". If the size of the found lost file is too small, you can adjust the size for each single file by selecting Properties from Object menu.

For more information on recovering lost files refer to File System Issues.

## 7. Viewing lost or deleted files

By selecting View as from Object menu, you can view a selected file as text, hexdump or via the in-built viewer.

The hexdump will show the data of the file in a new window as it is stored physically on-disk. The left side of that window will show the data as a series of bytes in hexadecimal form and the right side will show the data series represented as ASCII text.

The text viewer will interpret the data series of the file as ASCII (if the deleted data is no plain-text the text viewer will stop at the first occurring special character).

The in-build viewer will show common file formats in a separate window. Since for most types the viewer needs to create a temporary file on your system drive, it is recommended not to use this option if you need to recover files of your system drive. Otherwise these temporary files could overwrite your deleted data.

## 8. Other options

By selecting Options from Object menu, you can adjust the following settings:

The appearing window will display a list of all accessible drives found on both Windows logical drives and physical drives in your system. If your drive is listed under 'Logical drive', select your drive which contains the deleted files or directories.

### Display

Allows you to change the font style used for displaying files and directories in the directory tree and the file list view.  
Toggle wizard on program start.

### Files

Allows you to change the default symbol ("\_") used for deleted files whose first letter is lost.  
Let URGENTRECOVERY rename duplicate files and folders automatically on save

### Scan options

Choose FAT-number or noFAT  
Toggle skipping of reading bad clusters for the selected logical NTFS- or FAT-drive. If enabled, in the drive's file system bad marked clusters will be skipped.  
Toggle searching for lost files (raw data) found during 'Find lost data' and 'Full scan/ find format'. Setting the default size for lost files, whose size could not be determined.  
Toggle filter for displaying of 'rebuilt drives' and 'lost drives'

### Drive access

Disable drive checking drive during drive scanning. Switching off the several kind of drives allows you to use the program on drives that may be incompatible. This is the case if the programs hangs after clicking on "Open drive".

Enable read-ahead caching to speed up disk access  
Toggle Windows error messages (that may appear if Windows cannot read a sector from the drive)

\* this feature applies only to URGENTRECOVERY Professional.

