Restore files from a damaged hard drive using ZAR?

Version 1.0
March 2, 2009

By Wally Bahny

Imagine this scenario: your computer will not boot. It turns out your hard drive has crashed, and you have never taken a backup of your important files, let alone a recent one. What do you do? Alexey Gubin at might just have the solution for you.

Zero Assumption Recovery (ZAR, for short) is a shareware-based utility that can scan your hard drive for files, even if it has been re-formatted or is damaged. Using a fairly simple, wizard-based user interface, ZAR will walk you through the steps to recover important data from an otherwise inaccessible hard drive.

Installation and payment options

Head over to the ZAR Web site, click on the ZAR Downloads page, and download the installer for "General File Recovery" (should be a file named zarXXsetup.exe where XX = the current version number). The installation routine is a simple one that you have probably seen dozens of times.

The download comes is the free trial shareware version with some important limitations. Per wizard cycle, you are only allowed to select files in four folders. While this may seem okay, be warned that if your My Documents folder is arranged like:

- My Documents
  - Home
  - My Pictures
  - My Videos
  - School
  - Work

You will be unable to choose just the My Documents folder and get all of those subfolders and their files. You will instead have to make multiple passes with ZAR in trial mode to get all of your files restored.

The other option is to pay for a license key. Currently, ZAR costs $49.95 for a single-user instance which, depending on the importance of the data you are going to lose, may just be worth it. The alternative is seeking out a computer repair shop to do the work, which might more than double that cost.

There are a couple of recovery options using ZAR. The first is to put the damaged hard drive in another system and install ZAR on that system.

The other option (if you do not have access to another system or that system has no open IDE/SATA ports) is to create a Windows bootable flash drive (as outlined by Greg Schultz) and install ZAR onto that device. Then, all you have to do is connect the flash drive to the system and boot from the USB device.

If your hard drive is only partially damaged and still boots, do not attempt to install ZAR on that hard drive. You may cause further damage to your data and make recovery totally impossible.

Copyright ©2009 CBS Interactive. All rights reserved.
For more downloads and a free TechRepublic membership, please visit http://downloads.techrepublic.com.

Restoring files

Note: This article is only covering the basic (and, yet, most common) restoration technique. Visit the ZAR Web site for more tutorials.

Once the setup has finished, ZAR will launch automatically.

The first screen you will see is a simple Welcome screen (**Figure A**). On this screen, you can enter your unlock code (if you purchased one), enter Advanced configuration (not covered in this tutorial and which will not be needed in most cases), or simply click Next to begin the recovery process.

Figure A

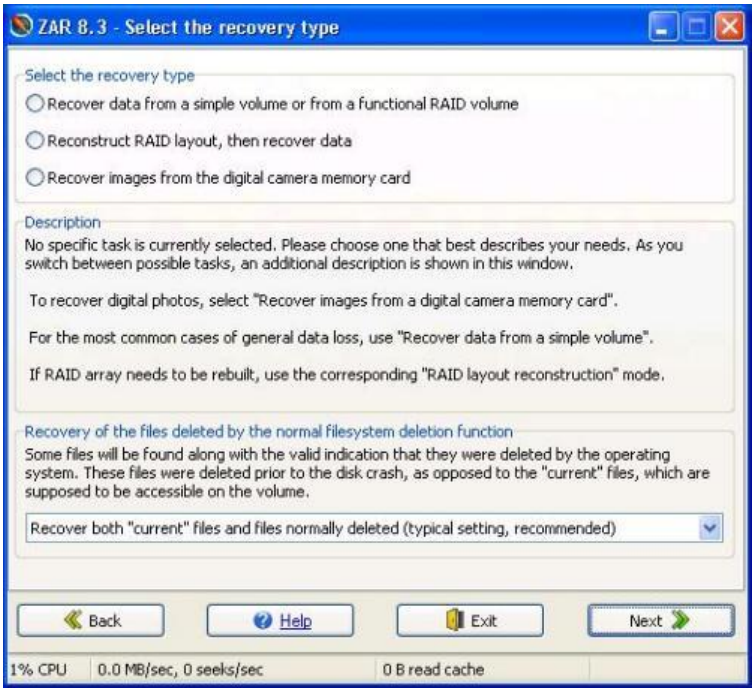
Welcome screen

On the next screen (**Figure B**), you are prompted to choose the Recovery Type. For most individuals, the first radio button will be the option to choose. Also, most people will choose to keep the default choice for the Deleted Files option near the bottom. Click Next.

An interesting side bar: *ZAR allows you to use this tool for free to recover images off a digital camera memory card. See the website for more information.*

Copyright ©2009 CBS Interactive. All rights reserved.
For more downloads and a free TechRepublic membership, please visit http://downloads.techrepublic.com.

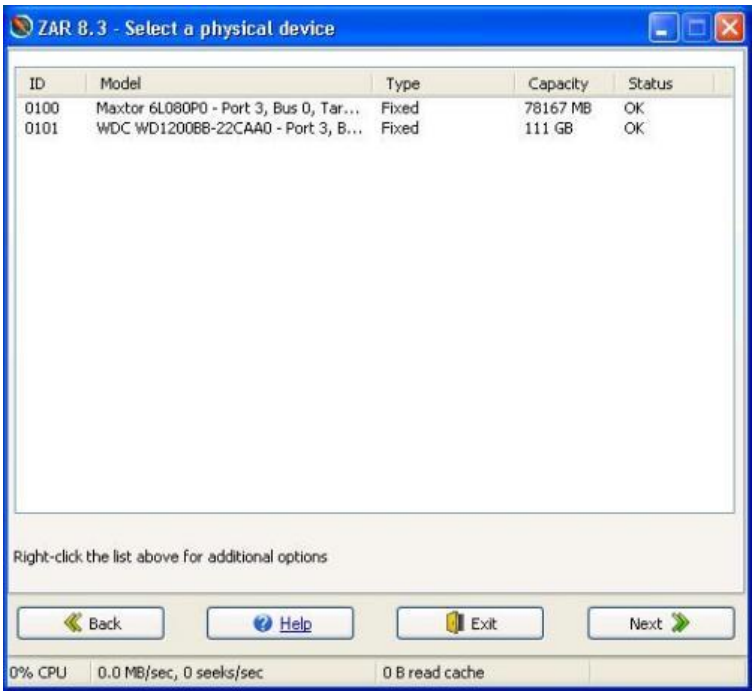
Figure B



Recovery Type

ZAR will take a moment or two to scan your system for devices to recover from. Once this process has completed, a screen like **Figure C** will appear. Choose the damaged hard drive from the list and click Next.

Figure C

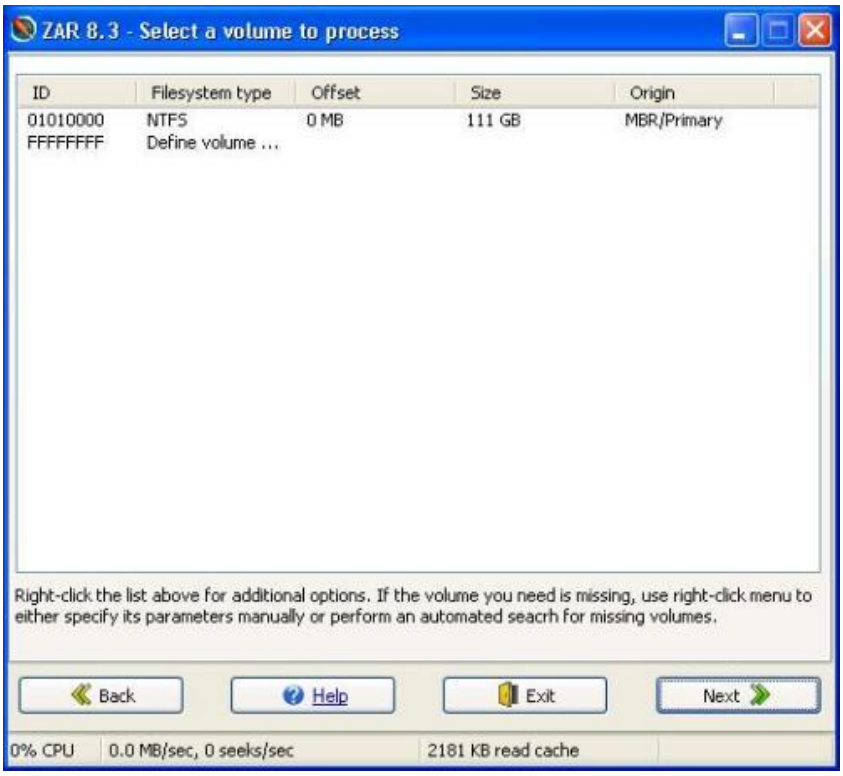


Devices

Copyright ©2009 CBS Interactive. All rights reserved.
For more downloads and a free TechRepublic membership, please visit http://downloads.techrepublic.com.

After selecting the damaged device, you are prompted to choose the volume within that drive that is damaged (**Figure D**). Many hard drives will only contain one volume, so this is an easy choice. If you are unsure which volume to choose, you can always back up to this screen and choose another. Click Next after choosing the appropriate volume.

Figure D



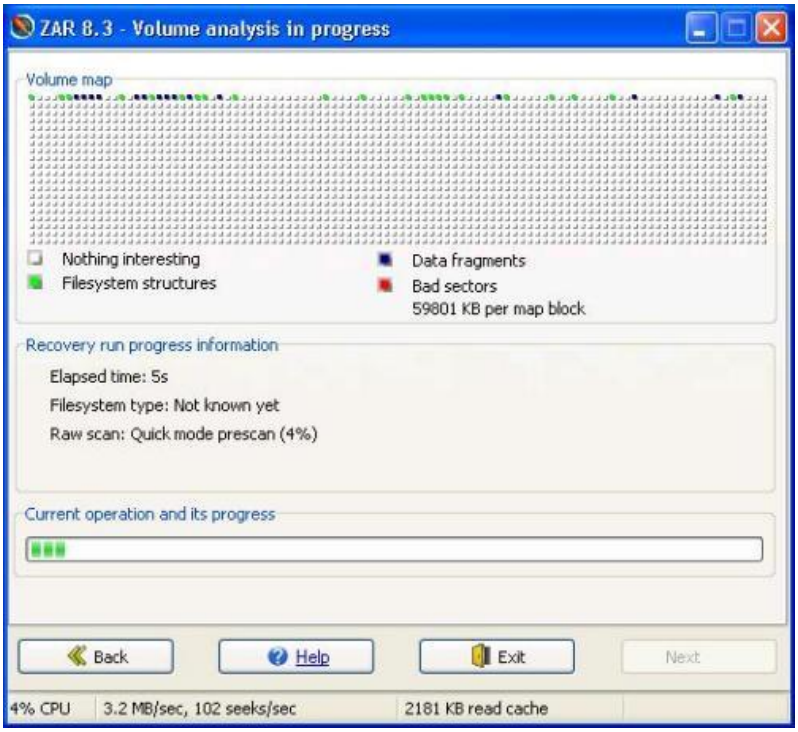
Volumes

On the next screen, ZAR will perform a several step process involving the scanning of your hard drive for all file information and the plotting of different block types in a graphical presentation (**Figure E**). Depending on the size of your drive and the speed of your computer, this phase can take anywhere from a couple of minutes to several hours. The steps are:

- A Quick Pre-Scan -- identifies the basic layout of your device
- Identify which blocks contain actual data
- Detect Volume Parameters -- determines the file system type and maps whatever is left of the Master File Table
- Parse File System -- Actually locating what blocks constitute files and directories and reconstructs the directory tree

Copyright ©2009 CBS Interactive. All rights reserved.
For more downloads and a free TechRepublic membership, please visit http://downloads.techrepublic.com.

Figure E

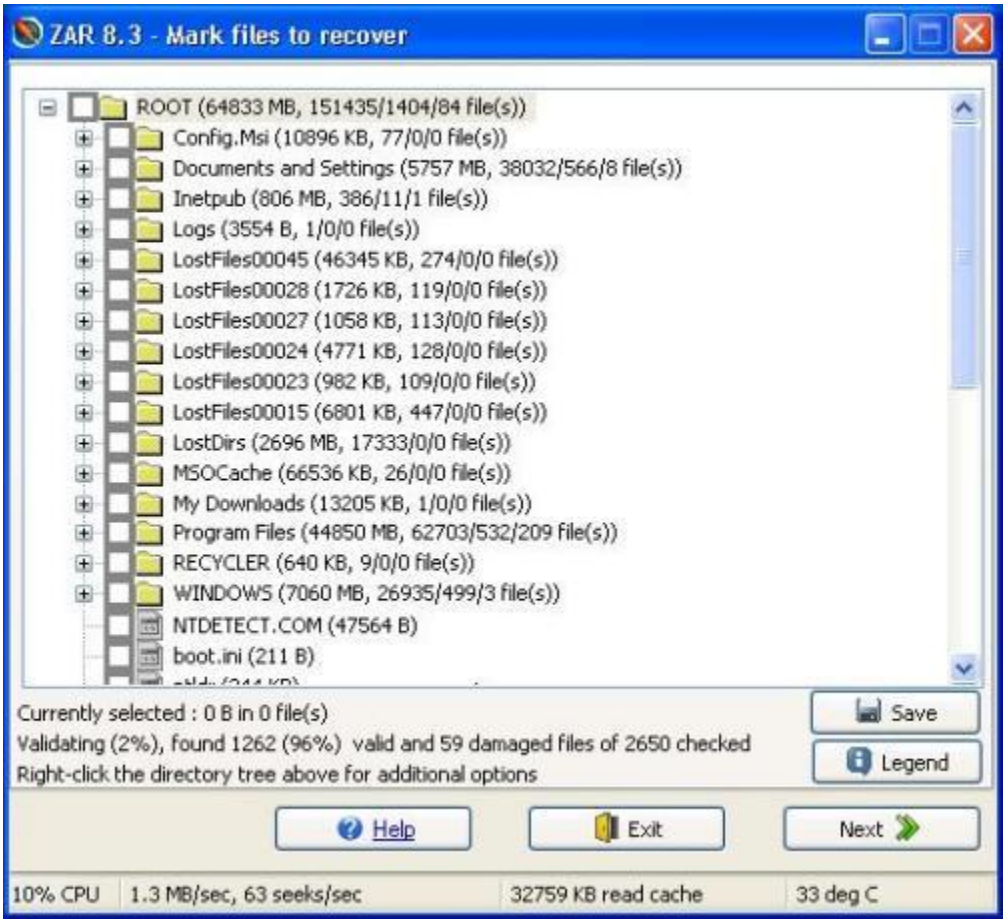


Scan

Once the scan is complete, you will be automatically taken to the next screen (**Figure F**). This screen allows you to choose the files and folders that you would like to recover by simply checking the box next to the item. If you are using the trial version, you are reminded that you are limited to four folders upon entering this screen.

Copyright ©2009 CBS Interactive. All rights reserved.
For more downloads and a free TechRepublic membership, please visit http://downloads.techrepublic.com.

Figure F



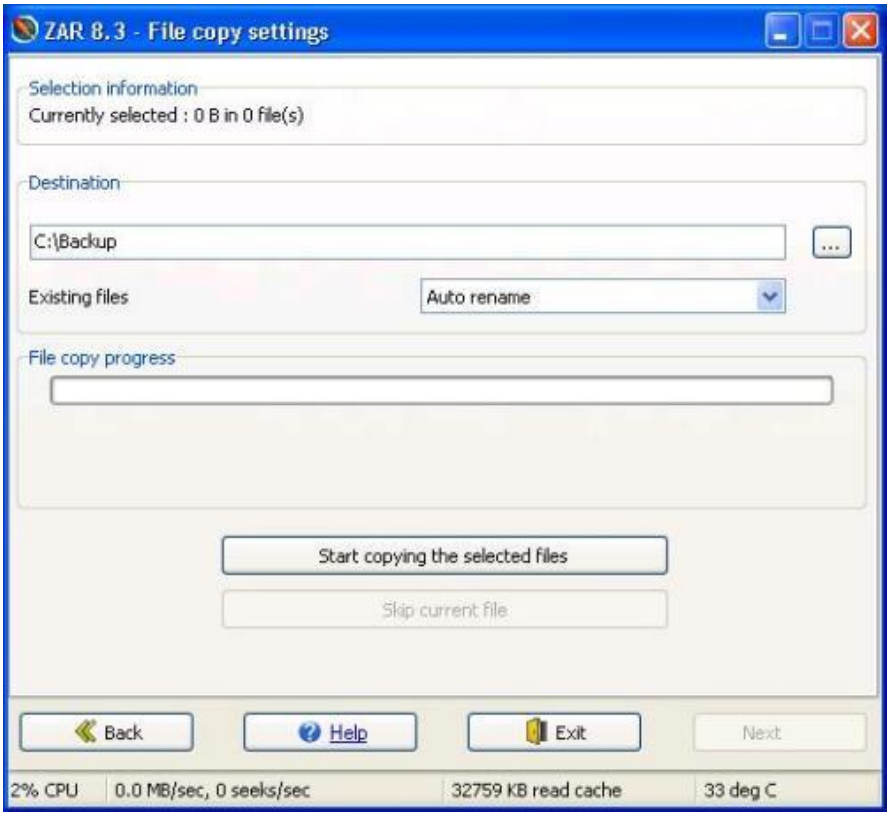
Files

The tree view should be a familiar layout and make it simple to find and select the important files. There may also be folders named Fragments or LostFiles followed by a number, which may contain your files, especially if they have been recently deleted.

Finally, click Next to see the final screen (**Figure G**). This screen allows you to specify a location to save the files to. Choose a restore to folder and click the Start Copying button to finish the process.

Copyright ©2009 CBS Interactive. All rights reserved.
For more downloads and a free TechRepublic membership, please visit http://downloads.techrepublic.com.

Figure G



Save

If you are using the trial version, you will need to start again completely from scratch and do this process again and again to recover all of your files. After a couple of passes, you will probably be more than willing to pay the $49.95.

More information

Zero Assumption Recovery also has several other tools available to fulfill your recovery needs. Take a look at the Web site if you need to recover e-mail messages from a damaged e-mail data file, image a disk for recovery purposes, or reclaim disk space.

Copyright ©2009 CBS Interactive. All rights reserved.
For more downloads and a free TechRepublic membership, please visit http://downloads.techrepublic.com.

Additional resources

- TechRepublic's Downloads RSS Feed XML
- Sign up for TechRepublic's Downloads Weekly Update newsletter
- Check out all of TechRepublic's free newsletters

Version history

Version: 1.0

Published: March 2, 2009

Tell us what you think

TechRepublic downloads are designed to help you get your job done as painlessly and effectively as possible. Because we're continually looking for ways to improve the usefulness of these tools, we need your feedback. Please take a minute to drop us a line and tell us how well this download worked for you and offer your suggestions for improvement.

Thanks!

—The TechRepublic Downloads Team

Copyright ©2009 CBS Interactive. All rights reserved.
For more downloads and a free TechRepublic membership, please visit http://downloads.techrepublic.com.