



What is Data Recovery?

AN OVERVIEW OF DATA RECOVERY ISSUES AND TECHNIQUES

Professional Data Recovery

Professional data recovery is the process of obtaining usable data from inaccessible storage media and corrupted or deleted file sets.

Computers, MP3 players and digital cameras store data on some type of electronic media such as hard disk drives, diskettes or flash devices. Each type of media presents different recovery challenges. The data recovery process is very complex and labor intensive. Successful data recovery requires an intimate understanding of all of the technical details of modern data storage media, operating systems and file systems. It requires a well-equipped, controlled laboratory that is staffed with experienced, trained technicians. Without these resources, the chance of losing data or causing more harm to the media climbs considerably.

Causes for Data Loss

There are many causes for data loss including mechanical failure of the device, damage to the

device, human error, power surges and software viruses. There are two categories of data loss:

Logical Failures

A logical failure is when the media has not been physically damaged. A file may have been deleted, reformatted or contaminated with a virus. Generally, in these situations, data is easier to recover as long as the data has not been overwritten by subsequent usage.

Physical Failures

A physical failure is when the media has been damaged or experienced a mechanical failure. Fire or water damage can result in a physical failure or, in the case of a disk drive, part of the mechanism such as a spindle or head may have failed. In these cases, the media, such as a disk drive, must first be rebuilt before data recovery can be attempted. Often, by utilizing technology and specialized techniques, data can be recovered but, in some cases where the drive or device is too damaged, data recovery is impossible.



The Data Recovery Process

Seagate Recovery Services utilizes a four-step data recovery methodology:

1 Repair Disk

Damage to the hard disk drive, if applicable, is diagnosed and repaired. Damaged components are replaced. Firmware failures are identified and repaired.

2 Image Disk

The repaired drive is read and data copied to another disk, preserving the state of the data when the drive or media was received.

3 Retrieve Data

Damage or corruption to the file system is diagnosed and repaired to permit access to the individual files. Individual files are checked for corruption and repaired if necessary.

4 Restore Data

The retrieved data is then copied to new media (for example a USB drive) and returned to the client.

Each data recovery case is different and the process for data recovery may need to be modified to address these differences.

Know Your Data Recovery Options

Some data recovery companies exaggerate or claim artificially high recovery rates because they only make attempts on the simplest cases. If mishandled, 'quick-fix' attempts can actually make matters worse by further damaging the media or corrupting the data, making data recovery even more challenging.

Seagate Recovery Services is ISO 9001:2000 certified meaning that we had to pass a stringent

quality control process. Our lab technicians are qualified to handle all types of data recoveries, from more simple logical recoveries to complex physical recoveries.

We maintain an extensive inventory of parts so that we can quickly and properly reconstruct disk drives when necessary, and we maintain clean room environments to ensure your data is properly protected throughout the recovery process.



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