

OCTOBER 2009

How Unallocated File Space Can Help Your Case



Data & Computer
Forensic
Investigator
(NV PI Lic#1498)
Adrian Leon Mare



Technology has opened a door to a world of new ways of storing and obtaining important data. The internet, computers, cell phones, PDA's and other electronic devices that have memory storage enable us to communicate and save information electronically. When this is done, the data is saved into the memory disk of the device. So, if you own a laptop or desktop computer, all the files you use on and off the internet are saved onto your hard drive. All of these files are allocated, meaning they are able to be easily accessed by the user. The same goes for cell phones and PDAs; whenever a number is dialed, or a message is texted or the internet or other applications on the device are used – the data is saved into mini-disk memory storage.

What's the Difference between Allocated and Unallocated Files?



Follow me on
TWITTER:
DataForensics

Files that have been erased by the user are no longer accessible to him or her because they are relocated to unallocated file space. For instance, if you have a Word document and delete it into the trash can and then empty the trash can, you are no longer able to find that file.

With allocated files, they are stored in folders, on the desktop or elsewhere on the device. These files can be easily found by the user. Another term for allocated file space is active file space.

The retrieval of Unallocated File Space

Now, you may be thinking, "How can unallocated file space be accessed if they are inaccessible?" Well, this is where data forensic experts come in. Users may think that when files are deleted and the trash can is emptied, that they are per-



manently erased, but this isn't so. When files are erased on DOS, Windows, Windows 95,

Windows 98 and Windows NT, the data from the file remains on the unallocated storage space. That is, unless of course, DiskScrub, M-Sweep or other DoD certified file deletion software has been used.

The data that is left behind is retrievable through system recovery and computer forensics software utilities.

The data that is retrieved is coded in computer language, which must be decoded either by the system recovery or data forensic specialist.



Definitions:

Unallocated File Space – area or space on the hard drive of the computer/device that is available to write data to.

Allocated File Space – area or space on the hard drive that contains the operating system and user data files that are easily accessible to the computer user.

When the data forensic expert penetrates the unallocated file space; intact files, temporary files and remnants of files and subdirectories can be found. These files and fragments of data can contain important evidence for any given case.

The preservation of such data is very fragile from the standpoint of evidence preservation.

In some cases, security leakage of sensitive info and other important evidence had been found.

Using Unallocated File Space for Your Case or Cause

Whether you're looking to retrieve erased information for a legal case (domestic, criminal, child custody, child support, etc) or for personal reasons, using a data forensic expert can help. Just because it seems emails, text messages, phone numbers, phone calls and files have been erased,



it doesn't mean it is permanently inaccessible. A data forensic expert has the utilities needed to search unallocated file space for the data you're looking for. Get in touch with one today to see how your needs can be met.



The Methodology

- Seize eEvidence
- Authenticate
- Analyze
- Report

To receive this newsletter electronically via email subscribe at;

ExpertDataForensics.com

and click on

“**Contact Us**” to go to the subscription page.

Call **888-355-3888**
ext (802)

702-435-8885

We Can Help

ExpertDataForensics.com

Follow me on...



Case Logs for

September:

What's in Our Lab?

- *2 x Child Exploitation Cases*
- *3 x Infidelity Cases*
- *2 x Corporate Dispute Cases*