

# Sharing Hard Disk Data Over WIFI Network

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**Abstract** - In a current situation, we cannot access the hard disk data directly through mobile. We must require a computer or laptop as a mediator. In the existing method, mobile cannot read the files of a hard disk because mobile support exFAT file format and hard disk contain NTFS file format. In this proposed system we are going to connect and mount a portable hard disk to the mobile and read the files from a hard disk through the Storage Access Framework with the help of a mounting script. The Storage Access Framework is nothing but an interface of our application which makes it simple for a user to browse and manipulate data.

**Key Words:** Hard Disk, NTFS (New Technology File System), FAT (File Allocation Table), Mounting, Storage Access Framework.

## 1. INTRODUCTION

Android is a Google - designed mobile operating system. It is based on a modified Linux kernel version and other open source software and is primarily designed for mobile touchscreen devices like smartphones and tablets. Most of the mobile is now running an android - based operating system. These Android devices operating system support Fat12 (File Allocation Table),16,32, Ext3(Third Extended File System), Ext4 or exFAT (Extended File Allocation Table) file system. The file is stored in one or more clusters that are not necessarily next to each other when you write a new file to a hard disk, they may be rather widespread over the disk.

For High-capacity storage media such as HDDs which is NTFS (New Technology File System) type disks partitioned is not supported in an Android operating system. NTFS is the file system used by the Windows operating system to store and retrieve files on a hard disk. NTFS is the Windows equivalent of the File Allocation Table of Windows 95 (FAT) and the High-Performance File System. However, in terms of performance, extensibility, NTFS offers a number of improvements over FAT and HPFS.

In this proposed system we are going to connect a portable hard disk to the mobile and read the files from a hard disk through the Storage Access Framework. The Storage Access Framework is nothing but an interface of our application which makes it simple for a user to browse and manipulate data, as well as open documents, images, and other files across all preferred storage. Once we read the data from the hard disk, we can easily manipulate the data and we can also transfer our data via a wireless medium. We are developing an android application, here application will work as a mediator which can share data from one portable hard disk to another portable hard disk.

## 2. METHODOLOGY

Computer stores data on a piece of media (such as a disk or CD - ROM) in specific, structured file formats. In order to properly interpret its data, the computer must be able to read the format on this media if the computer does not recognize the format, errors are returned. Forcing your computer to work with corrupted or unrecognized formats will also cause your computer to write data incorrectly, rendering all the files stored on the media unrecoverable.

The storage device of NTFS file format cannot be easily mounted by an Android operating system that is why we cannot access NTFS file format. In this mounting script, there are certain stages after achieving those stages we can mount NTFS Storage device through which we can access NTFS file system. Mounting ensures that the media format is recognized by a computer if a computer is unable to recognize that format, the device cannot be mounted. When the media is mounted successfully, the computer incorporates the file system of the media into a local file system and creates a mount point through which you can access an external device, a locally available link.

Following are certain stages of mounting module

- 1) Parsing raw data stream of memory location.
- 2) Detect partition table.
- 3) Parse the partition table.
- 4) Parse the NTFS partition.
- 5) Generate the file directory and tree structure.

There are two different ways to store data on the drive for MBR (Master Boot Record) and GPT (GUID partition table) partition. This information includes where the divisions begin and start, so your operating system knows which sectors are bootable for each partition. Therefore, you must select MBR or GPT before creating a partition on the drive

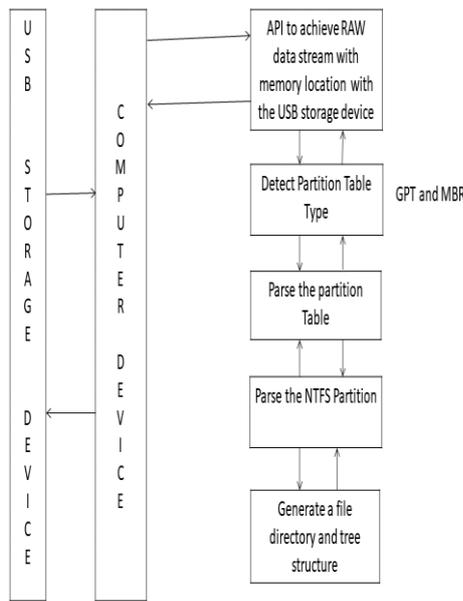


Fig: - Mounting Stages

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3. LITERATURE REVIEW

**Chanying qi, xiao zhang, huifeng wang, "Storage Space Reclaim Based on Cluster Bitmap in the NTFS", 04 December 2014.**

To improve the storage ratio of the storage area, thin provision is used extensively in storage area network (SAN) environments. The biggest problem is that block-level storage devices are difficult to understand about the release behavior of the host application storage space. By analysing the chart structure of the bitmap cluster prototype, you can identify the location continuously in the NTFS file system automatically and efficiently.

**Xiao He, Zhongxiao Wang, Jing sheng Zhang, "Research on security of hard disk firmware", 12 April 2012.**

Hard disk drive is used for computer system storage media. Computer users typically have a large amount of personal or business data in the hard drive. The hard drive firmware is the lowest, the most basic software to control the internal operation of the disk drive. In real life, many hard disk firms are due to problems with the firmware.