

Time to Say Goodbye

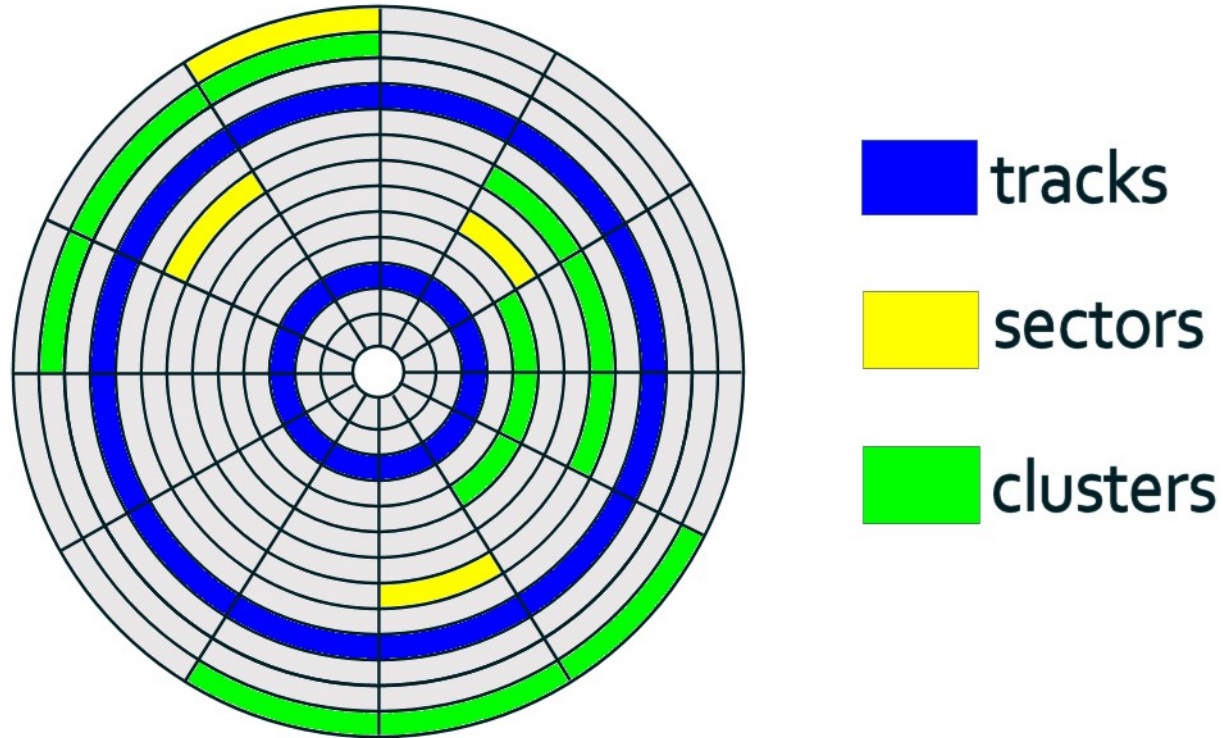
# How to Erase Your Data

# Legal Stuff

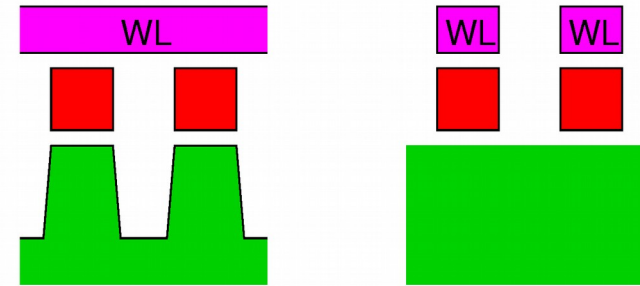
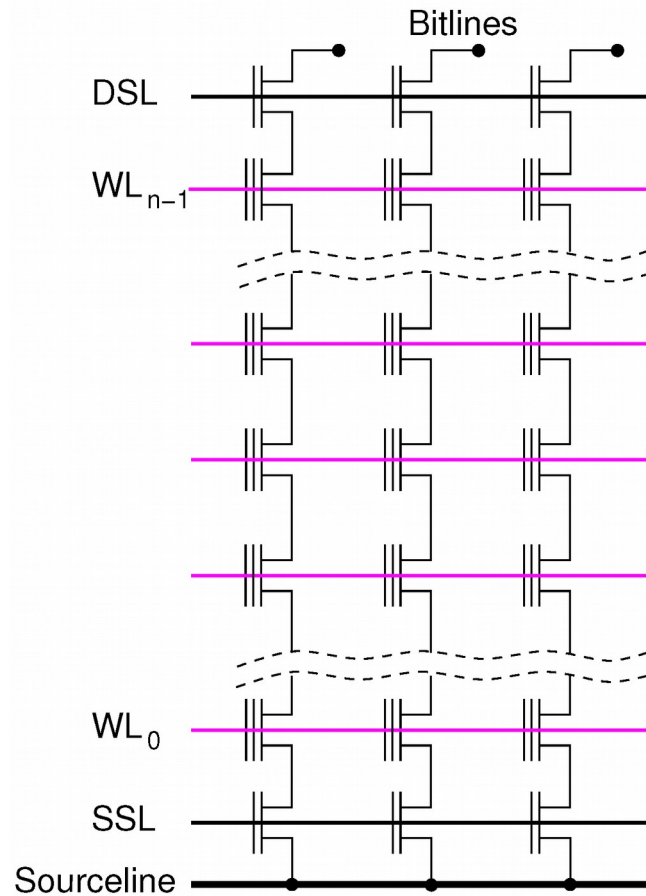
- **Art 17 GDPR** „Right to be forgotten“

# Some Vocabulary

## Hard disk drive structure

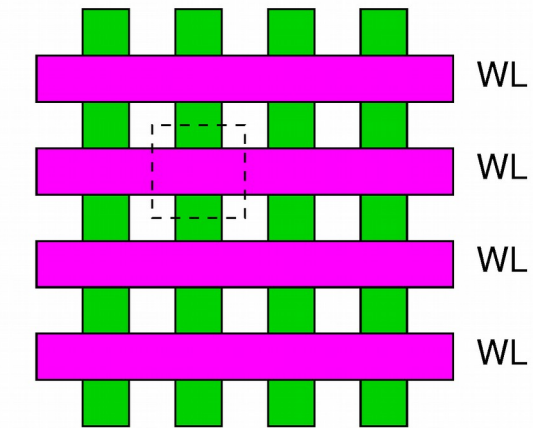


# Wear Leveling



a)

b)



c)

# What „delete“ actually means

- Quick format („format c:\“)
- Full format
- del file (remove directory entry)
- fdisk (remove partition table)
- Forget password for encrypted drive
- Delete files in cloud storage
- Delete on backup media

# Practical File Erasure

- `dd if=/dev/zero of=/dev/sda bs=4M status=progress`
- `shred` (Unix command)
- [File Shredder](#)
- [DBAN](#)
- `format` (DOS command)
- [CCleaner](#)
- [Parted Magic](#)
- [Undelete](#) plus (commercial tool)
- Hammer, drill, whatever physical comes to your mind

# Recovery Tools

- [Recuva](https://www.ccleaner.com/recuva) (https://www.ccleaner.com/recuva)
- [TestDisk](https://www.cgsecurity.org/wiki/TestDisk_DE) (https://www.cgsecurity.org/wiki/TestDisk\_DE)
- [PhotoRec](https://www.heise.de/download/product/photorec-45742) (https://www.heise.de/download/product/photorec-45742)
- [NTFSUndelete](https://www.heise.de/download/product/ntfs-undelete-57833) (https://www.heise.de/download/product/ntfs-undelete-57833)
- [SysRescueCD](http://www.system-rescue-cd.org/Changes-x86/) (http://www.system-rescue-cd.org/Changes-x86/)
- [Ultimate Boot CD](http://www.ultimatebootcd.com/) (http://www.ultimatebootcd.com/)
- [Kali Linux](https://www.kali.org/) (https://www.kali.org/)

# Urban Legends

- You must overwrite your data 7 times with white noise.



# Links

- [c't „Daten auf Computern sicher löschen“](#)
- [Datenrettungstools](#) im Test
- [Datenrettungs-FAQ](#)
- [Tipps](#) zur Datenrettung
- [Datenrettungssoftware](#) im Test
- [Daten](#) auf Computern richtig löschen
- [Daten](#) von Festplatten SSDs und Handys entfernen
- [Daten](#) löschen und wiederfinden
- [Daten](#) restlos von Speichermedien entfernen