

Table of Contents

Getting Started	
Introduction	1
Read this before doing anything	3
Part 1: What is data loss and what should you do	5
1.1 How data gets lost	6
1.1.1 Diagnostics	7
1.1.2 User errors	12
1.1.3 Software errors	14
1.1.4 Hardware errors	16
1.1.5 Virus/Spyware	19
1.2 Do it yourself or hire someone?	25
1.2.1 Things you may need	27
1.2.1.1 Making a bootable CD or USB drive	30
1.2.1.1.1 Creating a bootable CD/USB In Windows	31
1.2.1.1.2 Creating a bootable CD/USB in MacOS	36
1.2.1.1.3 Creating a bootable CD/USB in Linux	40
1.2.2 Making a copy or clone	44
1.2.2.1 HDClone (Windows/Mac)	47
1.2.2.2 EaseUS Todo Backup (Windows)	54
1.2.2.3 Clonezilla (Windows/Linux)	58
1.2.2.4 SuperDuper (Mac)	64
Part 2: Understanding data storage	67
2.1 Physical versus logical	68
2.2 Media	69

2.2.1 Hard drives	70
2.2.2 Flash storage (USB/SSD/Devices).....	76
2.2.3 Optical discs (CD/DVD/BD).....	77
2.3 File systems	81
2.3.1 FAT.....	82
2.3.2 NTFS	84
2.3.3 HFS+.....	87
2.3.4 EXT.....	89
2.3.5 Optical formats.....	90
2.3.6 APFS.....	92
Part 3: Deleted/corrupted file recovery	93
3.1 Windows PCs	94
3.2 Apple PCs.....	106
3.3 Linux PCs.....	110
3.4 Removable media.....	116
Part 4: Failed media recovery	118
4.1 Diagnostics	119
4.2 Standard methods.....	122
4.3 Brute force.....	123
4.4 Board replacement.....	125
4.5 Platter/Head replacement	128
4.6 Optical media recovery	135
Part 5: Deleted partition recovery	138
Part 6: Virus/Spyware/Crypto data recovery	143

Part 7: Preventing future data loss	147
7.1 Backup strategies	148
7.1.1 Z-DBackup (Windows).....	154
7.1.2 Easeus Todo Backup free (Windows).....	160
7.1.2.1 File backups with Todo Backup.....	161
7.1.2.2 Disk/Partition backups with Todo Backup.....	164
7.1.3 Time Machine (Mac)	168
7.1.4 fwbackups (Linux)	171
7.2 RAIDs	177
7.3 Virus/Spyware/Crypto prevention.....	180
Part 8: What if you don't want the data to be recoverable?	187
8.1 Encryption	188
8.2 Data destruction	190
Part 9: Wrapping up	192
9.1 Talking with the customer	193
9.2 Where to go from here	197
9.3 Index.....	198
9.4 Glossary.....	201
Part 10: Other books by the author	229