mrtlab
your data recovery, our committed solution.

MRT Advanced HDD Repair and Data Recovery Training Course

The First Day A.M. Western Digital Course

1. The course overview based on the MRT data recovery

2. WD start-up procedures

3. How to handle due to mismatch problem the hard disk does not work when replacing the PCB

3.1 WD ROM structure: ROM overlay loading (According to the appropriate firmware version)

3.2 30 module (SA defect)

3.3 0A module (head map)

3.4 47 module (Adaptation parameters)

3.5 0B (20B) (ROM Dir)

4. How to reconstruct ROM when ROM is damaged or does not match

The First Day P.M. Western Digital Course

1. A variety of reasons and analysis why hard disk can not be recognized

2. How to handle the problem of recognizing disk failure due to poor performance of the head

2.1 How to use virtual memory diagnostic tools

2.2 How to determine which heads are readable, which heads are unreadable

2.3 How to use image by heads map

3. How to handle the problem of recognizing disk failure due to SA firmware module damaged

3.1 How to determine the SA damage

3.2 How to handle the problem when SA has bad tracks

3.2.1 01 module (Module offset principle)

9.3 Zone list loading error

9.4 Analysis of ATA BUSY problem

10. Recover data by hot swapping

11. The method of converting WD USB hard disk to SATA hard disk

12. Recover data of WD USB encrypted hard disk

The Second Day A.M. Western Digital Practice Course

1. Data recovery demonstration of WD hard disk actual case

2. Demonstration of WD hard disk hot swapping

3. Recovering data practice of WD hard disks that bring by participants

The Second Day P.M. Seagate Course

1. The overview of Seagate hard disk structure

2. Hard disk loading order

2.1 Load ROM from boot code. ROM structure.

2.2 ROM overlay loading

2.3 HDD overlay loading

2.4 Structure and address of HDD information

2.4.1 Track file group (Create and repair LDR vol 0, vol 3, vol 5)

2.4.2 System file group (Create and repair LDR vol 0, vol 3, vol 5)

3. What to do when hard disk has no capacity

3.1 Seagate three-step method

3.2 Notes of three-step method

3.3 Transformation of three-step method that can handle more cases

3.4 Hard disk can not be recognized. Recalculating translator displays ”Init SMART failed” problem.

3.5 Learning how to use Seagate track read and write and ABA read and write tools

3.6 How to locate and fix SMART tracks

3.7 How to close SMART

3.8 When SMART system failure causes problem, besides to repair SMART tracks, there are other methods.

3.9 Hard disk is ready when power on, but it turns to “BUSY” when you perform any operations.

3.9.1 How to solve this problem with instant power on method

3.9.2 How to solve this problem completely by repairing firmware

3.10 Hard disk is not ready and shows “No HOST FIS-Ready Flag” error

3.10.1 Showing this error may be caused by a variety of reasons

3.10.2 How to determine specific reason

3.10.3 Fix this problem by writing module

3.10.4 Fix this problem by writing system file

3.10.5 Fix this problem by loading firmware

The Third Day A.M. Seagate Course

1. How to repair Seagate hard disk that front sectors are good, sequent sectors are bad

1.1 The reason of front sectors are good, sequent sectors are bad

1.2 Determine the type of front sectors are good, sequent sectors are bad

1.3 Fix front sectors are good, sequent sectors are bad by using defect list tools

1.4 Fix front sectors are good, sequent sectors are bad by using translator

2. What to do when hard disk is not ready and can not get to T level

2.1 Detailed method to short Seagate hard drive to get to terminal

2.2 Detailed method to degrade ROM to get to terminal

3. Notes for head replacement of Seagate hard disk

3.1 Overview of ROM structure

3.2 Head adaptation parameters of ROM

3.3 Head parameter adaptation by using ROM tools

4. Recover data by head map tools when heads damaged

5. Seagate terminal commands

6. Method of repairing bad sectors of Seagate hard drive

The Third Day P.M. Seagate Practice Course

1. Demonstration of Seagate hard disk common case

2. Demonstration of Seagate loading firmware method

3. Basic steps demonstration of Seagate hot swapping

4. Recovering data practice of Seagate hard disks that bring by participants

The Fourth Day A.M. Hitachi Course

1. How to handle Hitachi hard disk can not be recognized

2. Knowledge of the structure of Hitachi NV-RAM

2.1 Head map

2.2 Adaptation parameters and checksum

2.3 SA entry address, user area entry address

3. The problem that module list can not be opened and Hitachi hard disk can not accept any commands

3.1 Need to calibrate SA entry address of NV-RAM

3.2 How to set calibration parameters

4. Hitachi hard disk can not read user data. It prompts “Write cache disable”

4.1 The reason of writing cache disable

4.2 The method to fix writing cache disable

4.3 Skills of writing module

5. How to fix firmware module damage

5.1 SA overall offset

5.2 Recover Copy 0 by Copy 1

5.3 The functions of CHNL, CNS1, ZONE several key modules

5.4 The functions of micro program module, PSHT, RDMT

6. Hitachi hot swapping skills

7. Recover front sectors are good, sequent sectors are bad of Hitachi hard disk

8. Details of cutting head and repairing bad tracks of Hitachi hard disk

The Fourth Day P.M. Toshiba Course

1. The hard dive can be recognized but can not access user data

1.1 G-list may be damaged

1.2 How to repair G-list damage

1.3 How to use track read and write tools

1.4 Locate tracks where the G-list is

2. Unable to access user data and it is not the G-list problem

2.1 Extract data by using virtual translator

2.2 Detail of parameter settings of virtual translator

3. Detail of Toshiba CP module

4. The method of repairing Toshiba bad tracks

4.1 Detail of using defect list translator

4.2 Parameter settings of scan tools

4.3 Expand and arrange defect list

5. Details of cutting head of Toshiba hard disk

5.1 It used for shielding the damaged head

5.2 How to modify hard disk capacity after cutting head

5.3 Complete workflow of cutting head

The Fifth Day A.M. DE Course

1. Details of DE parameters

2. How to set DE parameters in specific situation

2.1 How to set DE parameters of replaced head hard disk

2.2 Parameter settings of DWF failed hard drive

2.3 Parameter settings of heads map

2.4 Multiple image and data completion problem

2.5 Details of DE skills

3. Details of file system function

4. Scanning lost partition list

5. How to adjust timeout parameter settings

6. Practical demonstration of a variety of situations

The Fifth Day P.M. Comprehensive Practice Course

1. Answer questions from participants

2. Recovering data practice guidance of hard disks that bring by participants