"USAGE OF PC–3000 EXPRESS/UDMA FOR DIFFICULT CASES WITH SEAGATE HDD" seminar program

MAIN PART

1. HDD boot sequence from power–up to complete readiness. Terminal modes (ESLIP, Online, Diag), their availability during various boot stages. ROM structure. HDD starting from Boot Code.

2. Firmware structure and arrangement. Groups of system files (vol 0, 3, 5…).

3. Monitoring of system files loading progress in a drive. Methods for identification of corrupted System Files using terminal commands (CtrlR, CtrlX, T>y) and by utility automatically detected information.

4. Media Cache. Definition, influence on drive operation, typical problems and their solutions.

5. Registry system file.

6. Saved Mode Pages system file.

7. 3.93, 3.17A, 3.346, 3.181, and 3.182 system files – their influence on HDD boot sequence, availability of technological mode commands, typical problems and their solutions.

8. The "No Host PhysReadyStatus Flags" status.

9. HDD firmware overlays. Loader (definition, creation, usage).

10. Translator and its influence on HDD boot sequence and operation.

11. Work with defect lists (Servo Flaws list, TA list, P–List, Non resident G–list, Alt–list).

12. Translator restoration methods. Automatic and manual solutions of translation problems. Structures of involved objects, typical corruptions, opportunities for quick restoration in case of partial corruption.

13. Changes in drive configuration necessary at the beginning of work on it. HDD ID editing on SA surface and in RAM. Alt–List integrity analysis, the necessity and acceptability of clearing the DOS tables and SMART.

14. "Utility actions" for Data Extractor.

15. Physical HDD damage. Corresponding symptoms and recognition methods.

16. HDD controller damage cases. Searching for a controller donor.

17. Damaged magnetic heads. Detection, methods of HDD start using isolation of damaged heads. Selecting a head donor.

18. HotSwap. Theoretical background of the process, methods of HotSwap donor preparation.

19. Drives with locked factory mode. Description and unlocking methods.

20. The procedure of the read channel short circuiting to obtain access to the terminal of hung drives.

21. Terminal commands: the list of helpful commands with descriptions.

- CtrlT
- CtrlR
- CtrlZ
- CtrlL
- CtrlX
- T>Vx
- T>ix,1,22
- T>m0,6,2,,,,,22
- T>m0,6,3,,,,,22
- 1>N1
- 2>x
- 7>X
- 7>m100
- A>Fxxxx,xxxx,,10
- C>Ux

LAB PRACTICE:

- Invalid extra defects in Non–resident G–List.
- Detecting lost POST track defects.
- Detecting a damaged head.
- Using short circuit to restore access to data in a hung Seagate F3 HDD with corrupted Media Cache.
- Obtaining access to technological mode in drives with firmware locks (locks of Lombard (Diag) and Grenada (Tech all) types).
- Using the procedure of technological mode unlocking with a hung Seagate F3 HDD without FW lock for obtaining access to the terminal of.