

3592 Tape Drives Experiences

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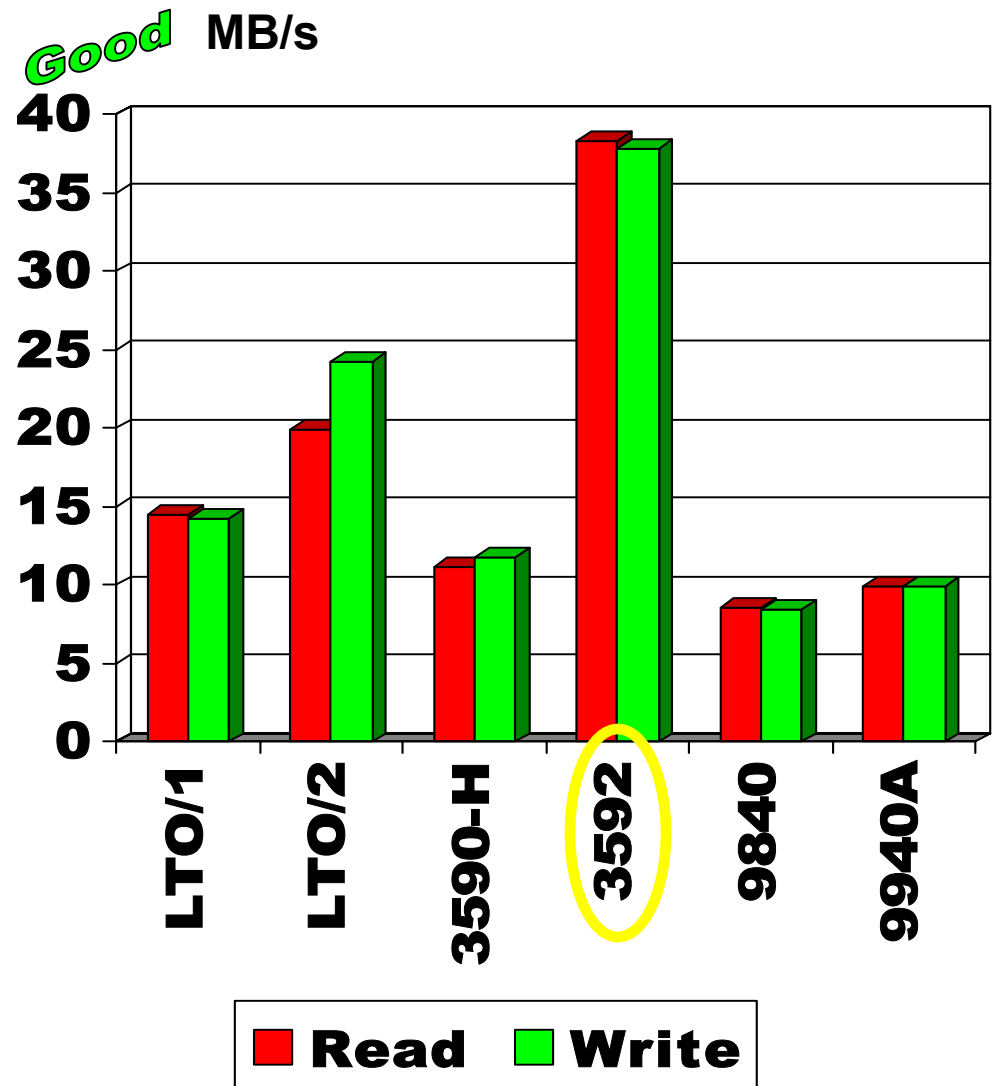
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IBM 3592 Tape Drives

- **Tape capacity: 300 GB uncompressed.**
- **Bandwidth: 40 MB/s uncompressed.**
- **Cartridge form factor similar to 3590/9940.**
- **Drive are FRU small form factor.**
- **Good loading characteristics (typically 28-40 seconds).**
- **Good positioning characteristics.**
- **Speed matching.**

Sequential operation

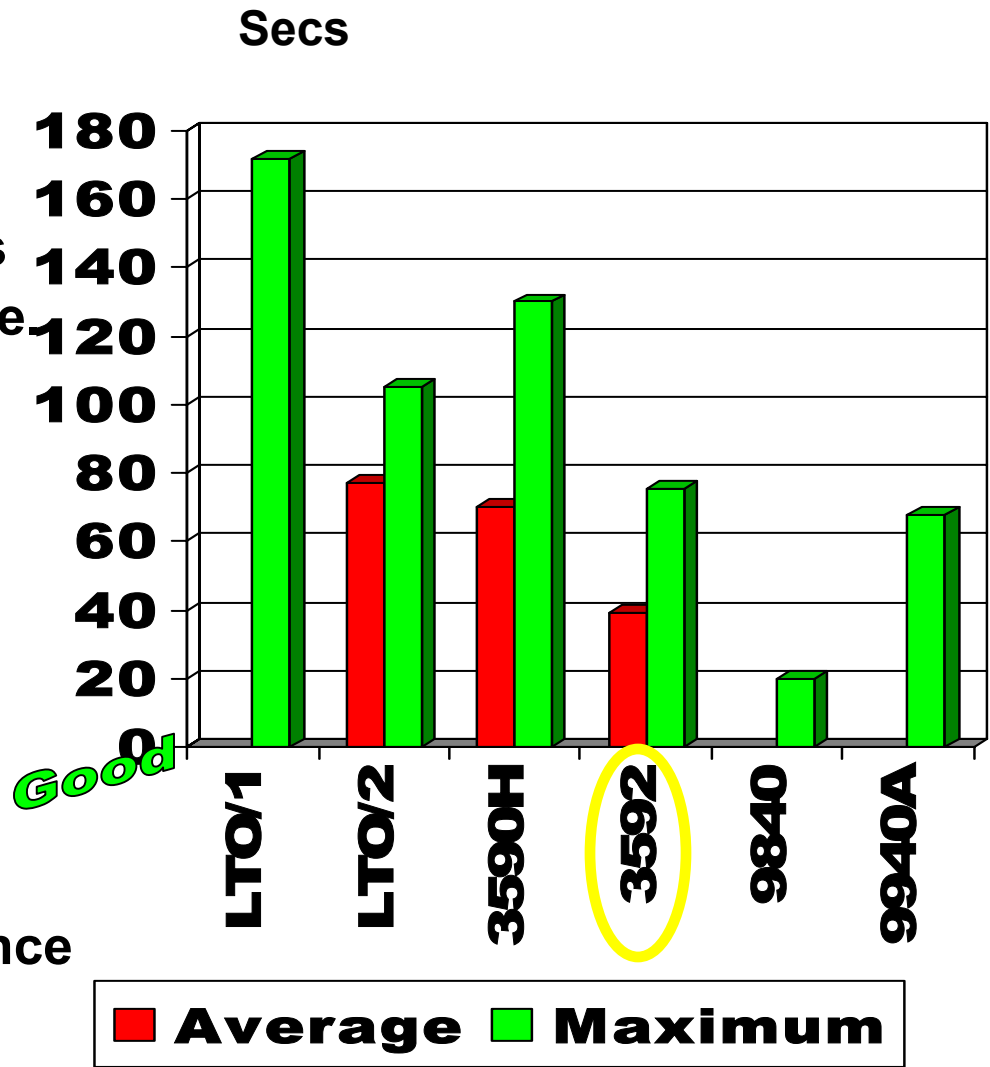
- Sequential operations on 5GB files.
- The test program uses double buffering.
- Compression is enabled.
- The data used is random, compression is close to nil.
- Note: Our benchmarks are not tailored to fit each drive best performances.



Positioning to 1st byte

- With the tape mounted and rewind, we position to the beginning of as many 1GB files which can be stored on the tape

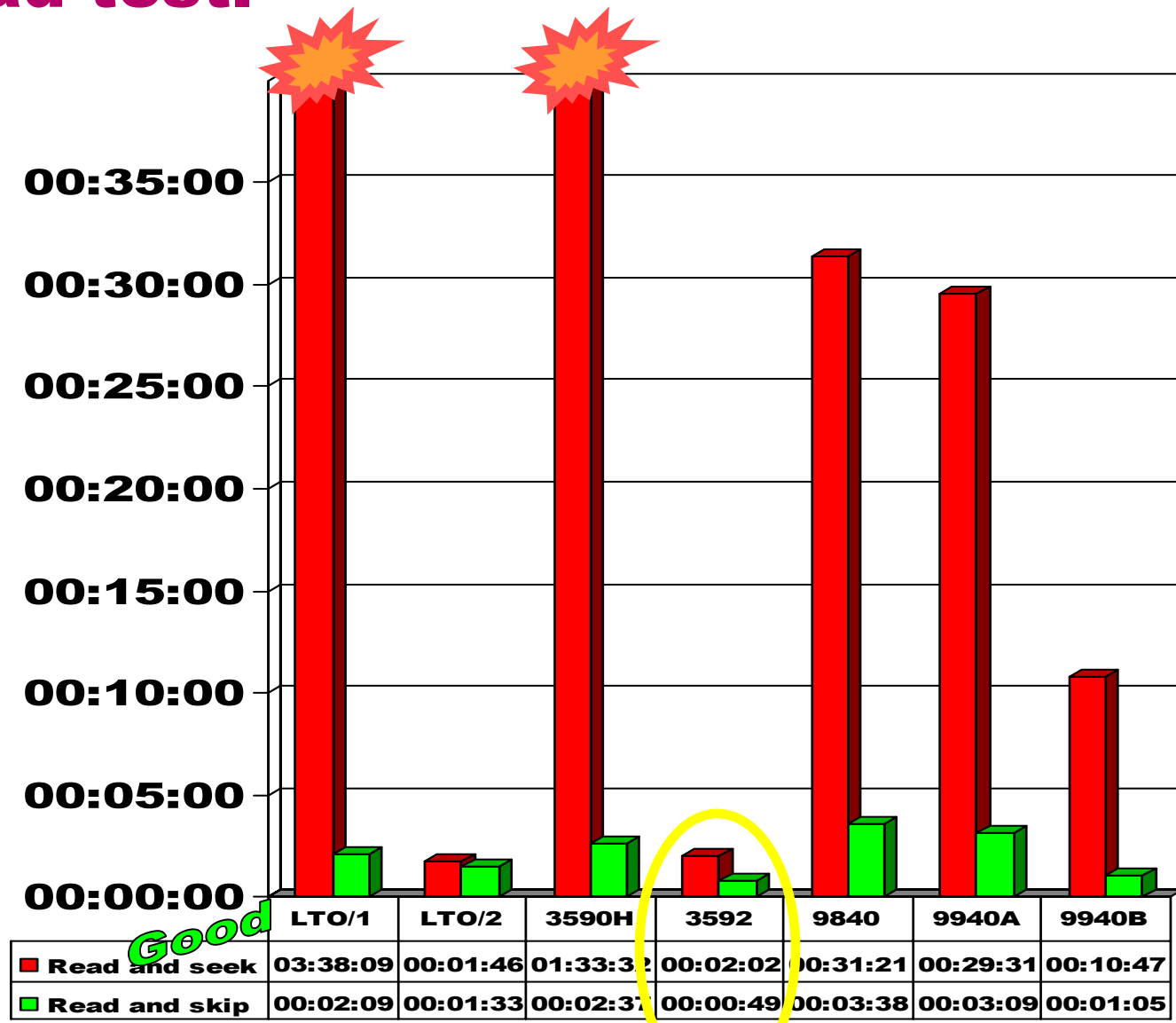
- Note: New microcode for the LTO/1 drives might have improved their performance since these tests were run



Locate and read test.

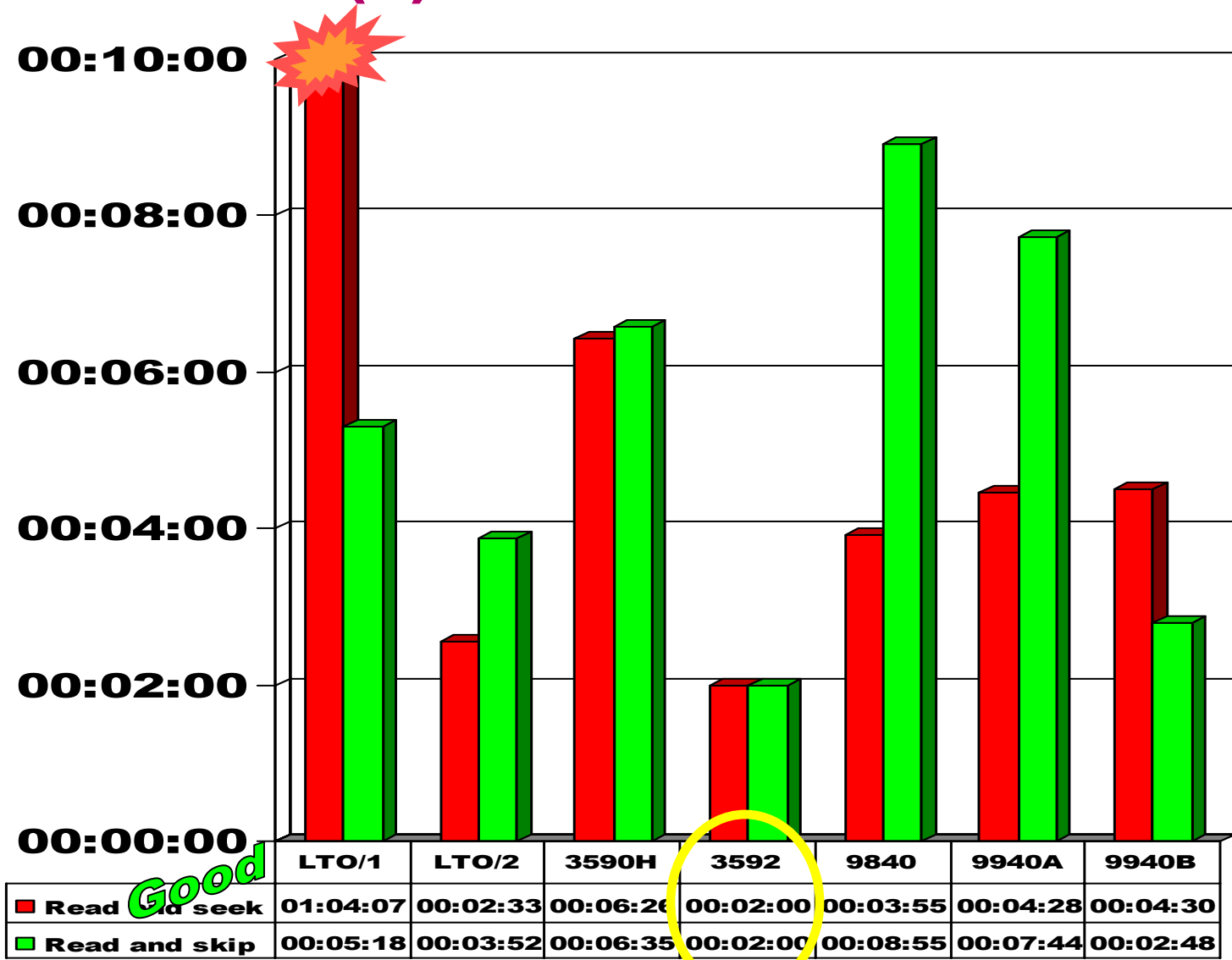
Our applications retrieve single objects scattered through the files on tape.

This test simulates the retrieval of 6000 28KB objects separated by small intervals (320K).



Locate and read test (2)

- Same test as before, except that 60 objects are retrieved from the files, separated by bigger intervals (60 or 90 MB).



In real life.

- **Beta tested these since spring 2003, in production since December 2003.**
- **Currently 60 installed in STK silos.**
- **So far, very reliable.**
- **The current support of these drives by HPSS works safely.**
 - ➔ **Is HPSS taking full benefits of all new introduced features?**
- **3592 drives suits very well the requirements of our applications.**
- **We may reduce the number of drives that we planned to install in 2004.**