TECHNICAL BRIEF

Tape storage test report

StorageTek® tape drive Open Systems performance

APRIL 2004

1 INTRODUCTION

The StorageTek® Engineering Validation Testing Group initiated a proof of concept (POC) in response to a request for a benchmark performance comparison between the current fibre StorageTek's T9840B tape drive, T9940A tape drive, IBM 3590-E11 and StorageTek's newer T9940B tape drive. These performance benchmarks will compare throughput versus block size for the fibre environment.

2 CONFIGURATION

The test set-up consisted of an RS/6000 model 7044-270 running AIX 4.3.3. The tape drives were directly connected to the server via a commercially available Host Bus Adaptor.

2.1 CONFIGURATION DATA

The following tables describe the hardware and software configuration details.

Table 1. Server/Host configuration.

Servers	Hardware Detail	Software Detail	Attachment (HBA)	Function
RS/6000	Power3-II SMP	AIX 4.3.3	Emulex LP9002	Fibre
Model	2x375 MHz			Adaptor
7044-270	256 MB			

Table 2. Devices/Peripherals configuration.

Vendor	Model	Firmware Version
StorageTek	T9840B tape drive	1.32.307
StorageTek	T9940A tape drive	1.32.222
StorageTek	T9940B tape drive	1.32.422
IBM	3590-E11	F27E

Table 3. Application configuration.

Vendor	Type	Name	Version	Patch
StorageTek	Performance	COMP_TEST	2.0	

2.1.1 Test description and expected results

The performance test writes approximately four gigabytes of data using desired record size and desired compression ratio. Three write and three read passes of four gigabytes of data from system memory are performed. Times to write and read are calculated on each pass. Log sense data of channel and device side write, as well as the read data, are used to calculate compression ratios. System time is used to calculate the data transfers rate performance.

2.1.1.1 Installation and set up

The test setup consisted of an RS/6000 model 7044-270 running AIX 4.3.3. The StorageTek and IBM tape drivers were directly connected to the server via commercially available HBA.

2.1.1.2 Test results and follow-up

The test results can be found in **Appendix A**. No follow-up items are required.

2.1.1.3 Specific issues

The tape drives performed without incident. No issues were posted.

3 APPENDIX A

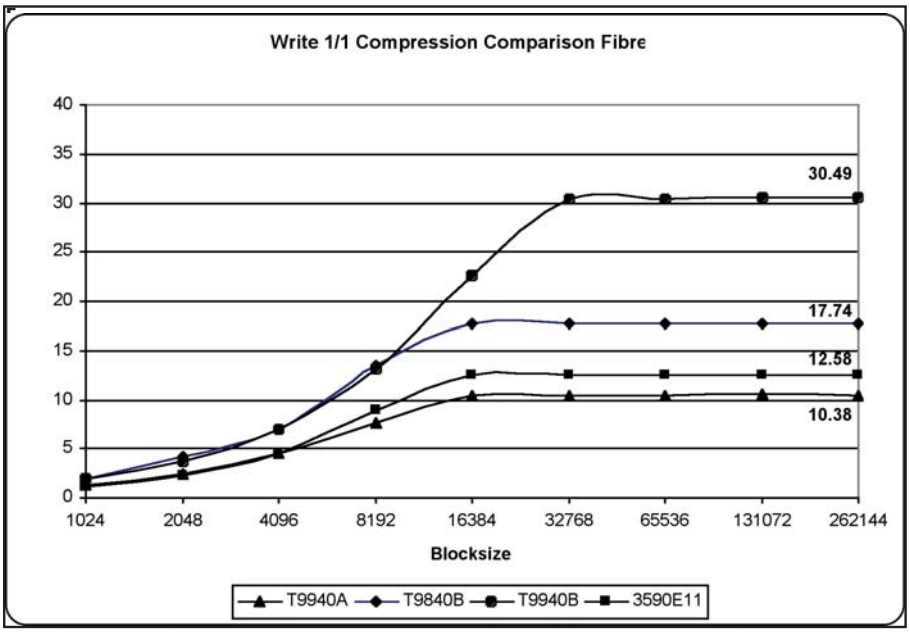

Figure 1. Fibre — Write with no compression.

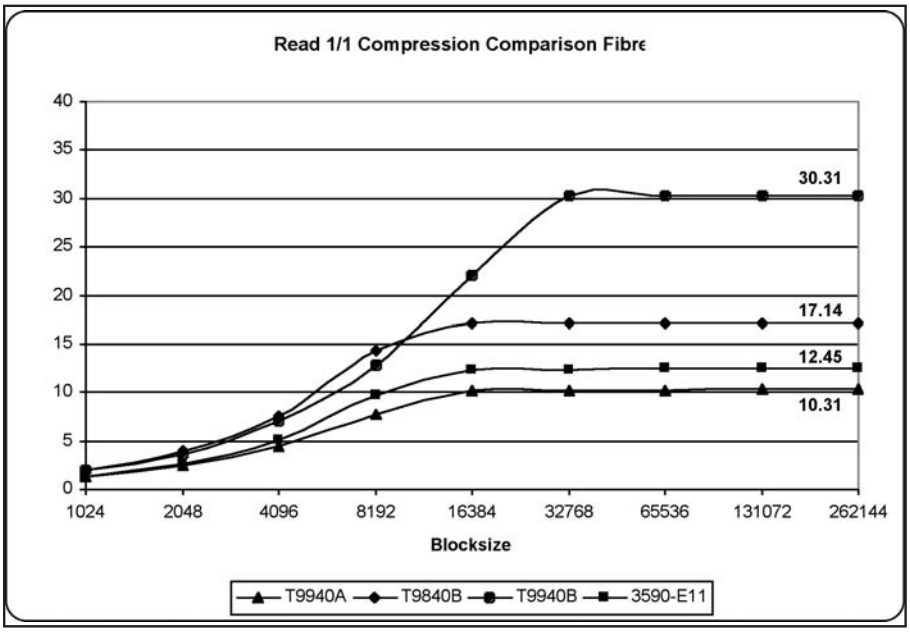

Figure 2. Fibre — Read with no compression.

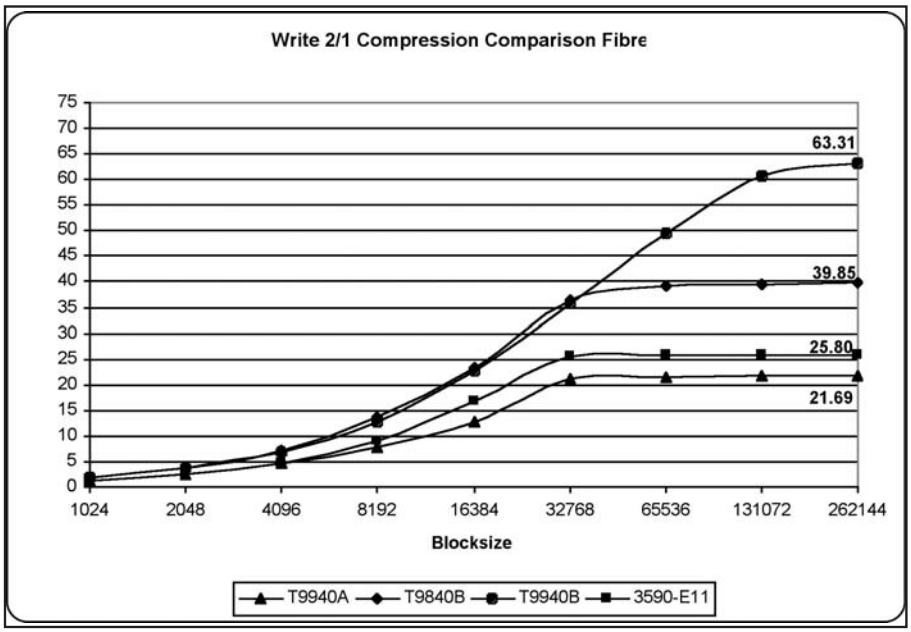

Figure 3. Fibre — Write with 2:1 compression.

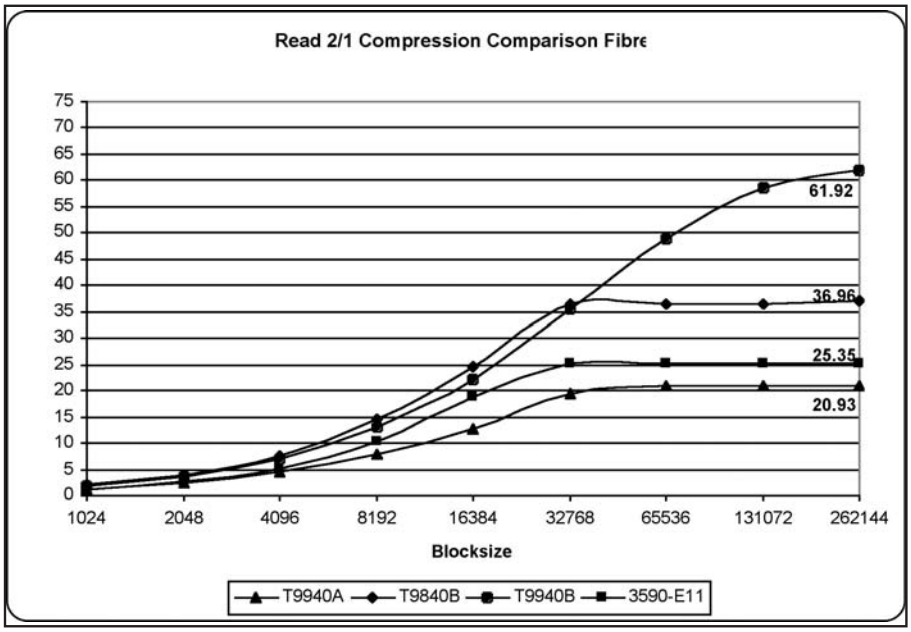

Figure 4. Fibre — Read with 2:1 compression.

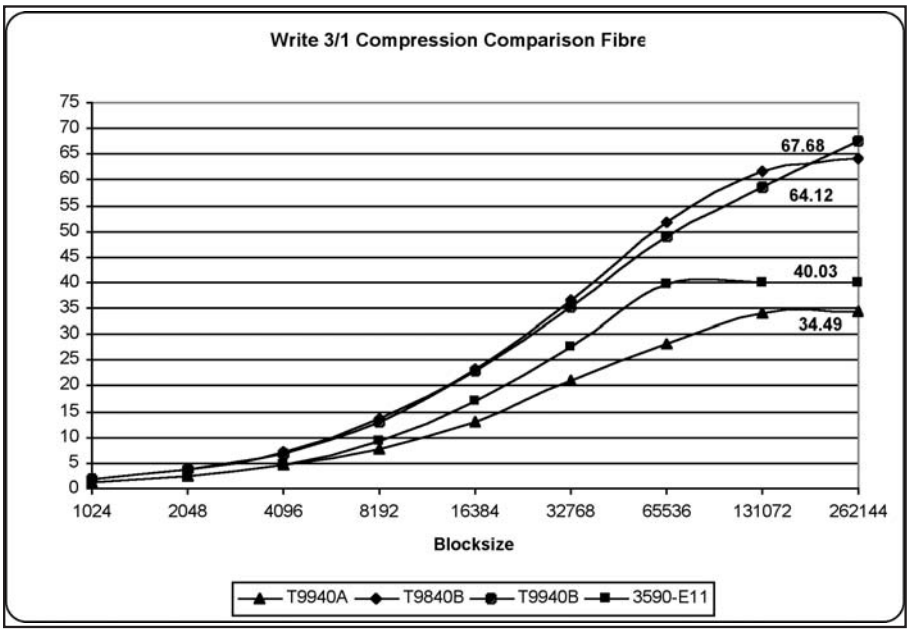

Figure 5. Fibre — Write with 3:1 compression.

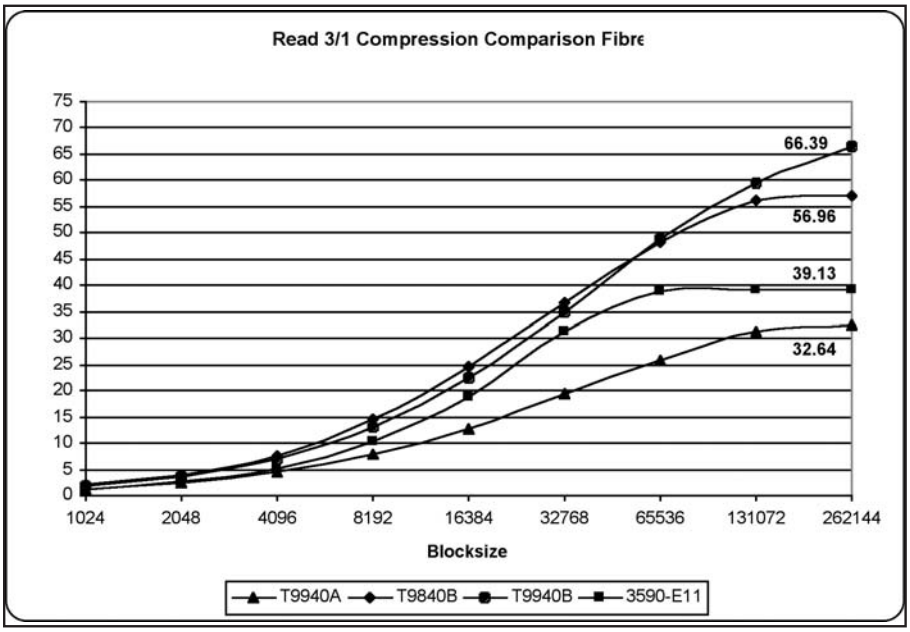

Figure 6. Fibre — Read with 3:1 compression.

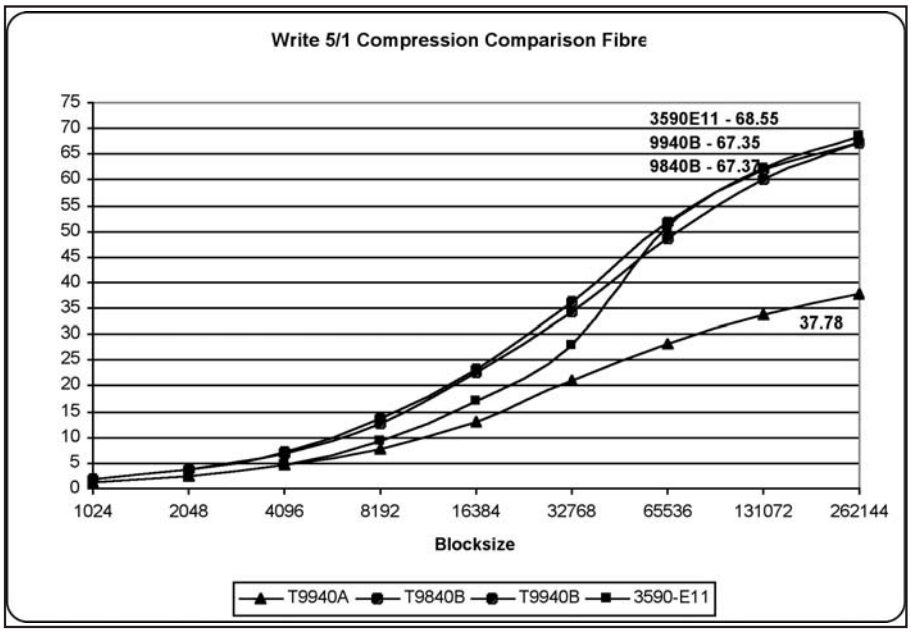

Figure 7. Fibre — Write with 5:1 compression.

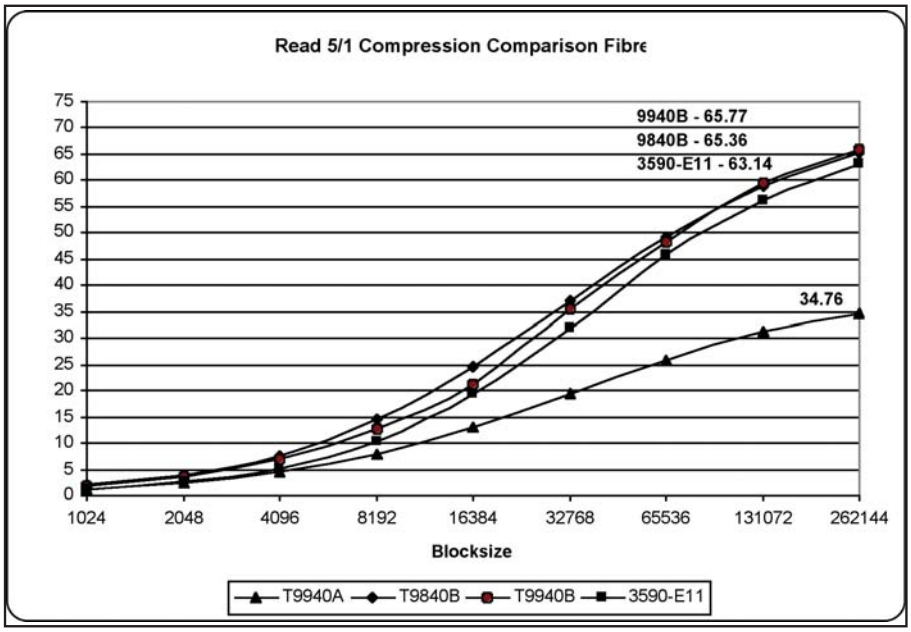

Figure 8. Fibre — Read with 5:1 compression.

ABOUT STORAGETEK®

Storage Technology Corporation (NYSE: STK), a $2 billion worldwide company with headquarters in Louisville, CO, has been delivering a broad range of storage management solutions designed for IT professionals for over 30 years. StorageTek offers solutions that are easy to manage, integrate well with existing infrastructures and allow universal access to data across servers, media types and storage networks. StorageTek's practical and safe storage solutions for tape automation, disk storage systems and storage integration, coupled with a global services network, provide IT professionals with confidence and know-how to manage their entire storage management ecosystem today and in the future.

StorageTek products are available through a worldwide network. For more information, visit www.storagetek.com, or call 1.800.275.4785 or 01.303.673.2800.

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