STORAGETEK ®

TECHNICAL BRIEF

StorageTek® T-Series tape drive technology roadmap

StorageTek® intends to deliver tape drives that will provide one terabyte of native data storage on a single media cartridge by 2007. The T-Series™ tape drive product roadmap demonstrates a schedule to deliver this capacity within the next two tape drive generations. Data throughput will be increased to maintain or reduce the total backup window period per cartridge and the higher cartridge capacity will lower the total cost of storage ownership.

StorageTek-manufactured tape drives are designed for enterprise applications to operate at high duty cycles and in harsh operating environments. Enterprise tape drives generally operate with tape motion up to 100 percent of power-on hours. Once limited to mainframe-attach interfaces such as FICON and ESCON, enterprise-class operating requirements now apply to growing Open Systems environments with Fibre Channel interfaces.

The T-Series drive roadmap began with the T9840A tape drive, .rst introduced in 1998. The latest T9840 tape drive, the T9840C, provides the fastest access to the .rst byte of data of any tape drive in the industry. The T9940A tape drive was introduced in 1999 and improved in 2002 with the currently shipping T9940B tape drive to support the expanding capacity needs of archive users. With the continued need to store increasing amounts of data, future T-Series tape drives are expected to store one terabyte of uncompressed data on a single media cartridge by 2007. The feasibility of this technology was pioneered by StorageTek in 2002 at the Goddard Storage Conference.
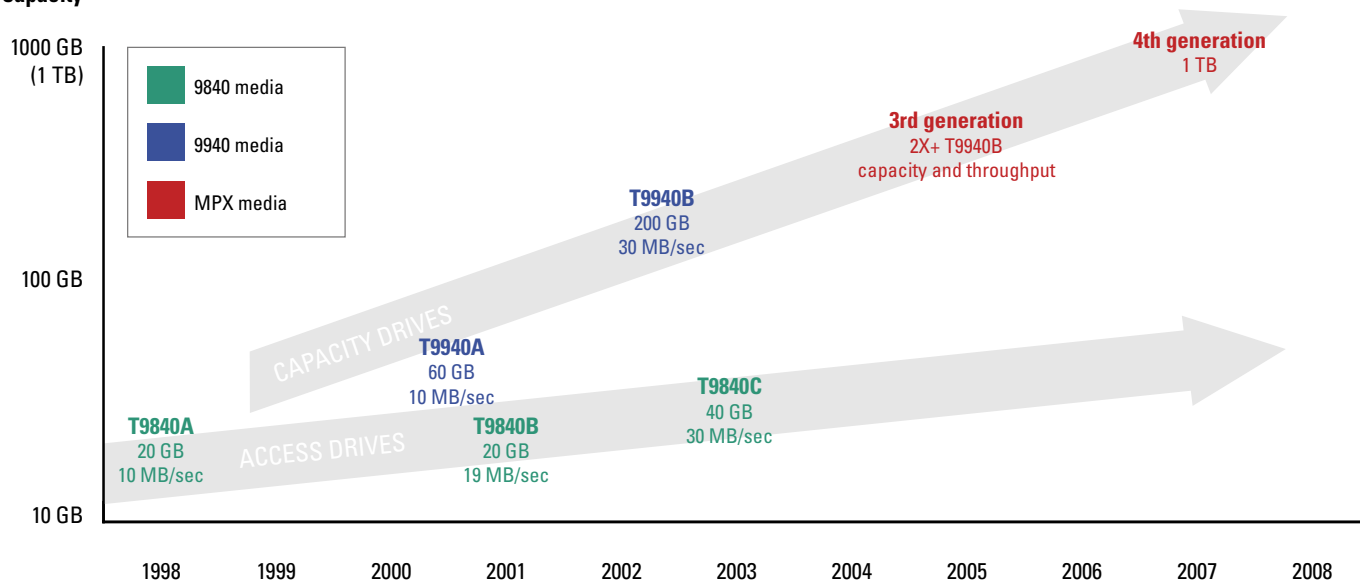
Capacity

Figure 1. T-Series technology roadmap.

T9840 tape drives

T9840 tape drives lead the industry in fast access by using a dual-hub cartridge, internal tape path and mid-point load. They were designed to complement StorageTek's high-performance automated tape libraries. This combination of robotics and tape technology provides a very cost effective alternative to disk for lower activity data. Fast recalls, high capacity and high throughput reduce batch run times and increase density of data in automated libraries. T9840 tape drives improve the performance of Virtual Storage Manager (VSM), Application Storage Manager (ASM), hierarchical storage management (HSM) and any recall-sensitive applications. Production batch and backup workloads also bene.t from these characteristics. The T9840 tape drive provided the industry's .rst native Fibre Channel connectivity and the .rst full fabric interface. Native FICON and ESCON interfaces provide mainframe connectivity without the complexity of additional control units. Media investment is protected by using the same media used across three generations of drives.

T9940 tape drives

T9940 tape drives apply the same technology in a single hub cartridge to deliver higher capacity to the same high usage environments. For applications with higher capacity storage requirements, these drives provide high throughput and even higher density of data. The T9940B drive set the standard for enterprise high capacity when introduced in 2002 with a 2-gigabit Fibre Channel interface for Open Systems environments. It is currently StorageTek's top selling enterprise-class tape drive. The T9940B drive is also supported in mainframe host-attach environments with ESCON and FICON interfaces.

Next-generation tape drives

Following in the footsteps of the T9940 drives, StorageTek is currently developing a tape drive designed to continue to push the envelope for tape capacity and speed. Using tape cartridge technology based on a joint media development program with Imation and Fujifilm and with an expected initial product release in 2005, StorageTek intends to more than double the capacity T9940B tape drive. We plan to deliver more than four times our current product's specifications for capacity-centric customers in 2007 with a one terabyte native capacity cartridge. We will continue our legacy of delivering media investment protection by using the same media for multiple generations of tape drives.

The StorageTek StreamLine™ architecture tightly integrates tape drives and tape libraries for a more ef.cient, reliable and manageable storage resource. The new T-Series tape drives will include integrated predictive and preventative diagnostics for even higher availability. Drive functionality will be remotely controllable, and drive and media diagnostics will be tracked independently.

The T-Series tape drive product roadmap demonstrates StorageTek's commitment to delivering products with a superior throughput-to-capacity ratio, delivering not only the increased data storage capacity that users demand, but maintaining and reducing the time required to .ll the higher capacity cartridge. We continue to focus on meeting enterprise-class operating requirements with high reliability and high duty cycle performance. Finally, the roadmap commits to allowing reuse of the third generation media in later drive technologies, continuing to drive down the total cost of ownership of tape assets.

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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