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**TANDBERG STORAGE PASSES LTO ULTRIUM FORMAT GENERATION 2  
MECHANISM COMPLIANCE**

**SILICON VALLEY, CALIF. — (April 6, 2005)** — Certance, HP, and IBM Corporation, the Technology Provider Companies (TPCs) for the Linear Tape-Open (LTO) Program, today announced that Tandberg Storage has passed compliance test requirements for its tape drives based on the LTO Ultrium format generation 2, making Tandberg the fourth manufacturer of LTO Ultrium tape drives.

“A key premise for the creation of the LTO Program was to provide an open forum in which any company could license and manufacture tape products based on the LTO Ultrium specification, and Tandberg Storage is another crowning example of the customer benefits provided by open-standards -- multiple suppliers, unique feature sets, and interchangeability among competing LTO manufacturers,” said Barry Rudolph, Vice President, Tape Storage Systems, IBM.

“Since LTO technology continues to increase its share of tape sales, the timing was right for Tandberg Storage to offer an LTO Ultrium format generation 2 tape drive to the small and medium size business segment,” said Erik Solhjell, CEO of Tandberg Storage. “After an arduous and thorough testing process, it is a momentous occasion to pass compliance verification by the LTO Program.”

In adherence to its compliance testing, the LTO Program requires that all licensees pass a series of compliance verification tests, which include rigorous data interchangeability testing before being issued a license to sell and the right to display the trusted LTO Ultrium trademark. Compliance testing of all Ultrium tape products must be completed annually to ensure that each manufacturer adheres to the LTO Ultrium format specifications. Buyers seeking true Ultrium format-compliant products should look for the LTO Ultrium format compliance verification trademarks on both tape drives and data cartridges.

The LTO Program has issued its specification for the LTO Ultrium format generation 3, LTO WORM, and recently announced an extended roadmap to the sixth generation.

### **LTO Ultrium format generation 3**

The LTO Ultrium format generation 3 doubles physical storage capacity over generation 2, increasing to 800 GB from 400 GB (assuming a 2:1 compression). Transfer rates in generation 3 improve to up to 160 MB per second (MB/s) from 80 MB/s in generation 2 (assuming a 2:1 compression) allowing for up to 576 TB of backup performance per hour. The LTO Ultrium format generation 3 drives also offer backwards-compatible read-and-write capability with the Ultrium format generation 2 cartridges and backward read capability with generation 1 cartridges, helping to protect the investment customers have made in LTO technology.

### **LTO WORM**

The LTO Program WORM implementation is designed to provide users with a very cost effective means of storing data in a non-rewriteable format to help address compliance regulations.

Robust algorithms using the Cartridge Memory (CM), in conjunction with low level encoding that is mastered on the tape media at the time of manufacture, are designed to prevent tampering. The LTO Ultrium format generation 3 specification includes the ability for WORM enabled and non-WORM enabled drives to co-exist. In addition, appending data at the end of a WORM cartridge which was previously written to is supported, thus allowing customers to take full advantage of the high capacity tape media.

### **Updated LTO Ultrium Roadmap**

#### **LTO Ultrium Generation 5**

The LTO Ultrium format generation 5 is planned to double physical storage capacity over generation 4, increasing to 3.2 TB compressed (assuming a 2:1 compression). Transfer rates in generation 5 are planned to improve to up to 360 MB per second (MB/s) (assuming a 2:1 compression).

#### **LTO Ultrium Generation 6**

The LTO Ultrium format generation 6 is planned to double physical storage capacity over generation 5, increasing to 6.4 TB (assuming a 2:1 compression). Transfer rates in generation 6 are planned to improve to up to 540 MB/s (assuming a 2:1 compression).

The complete roadmap can be found at [http://www.ultrium.com/newsite/html/format\\_roadmap.html](http://www.ultrium.com/newsite/html/format_roadmap.html).

### **How to License LTO Ultrium Technology**

The LTO program offers several different license packages – from enhanced packages that provide the specifications and licenses to manufacture Ultrium products, to basic packages, providing Ultrium format specifications and guidelines for interchangeability.

Buyers seeking Ultrium format-compliant products should look for the Ultrium format compliance verification trademarks on both tape drives and data cartridges. Storage and media manufacturers interested in licensing LTO technology may obtain information by contacting the Law Offices of Ladas & Parry at (323) 934-2300, or by e-mail at [LTO\\_INFO@ladasparry.com](mailto:LTO_INFO@ladasparry.com).

**About Linear Tape-Open (LTO) Technology**

LTO technology is a powerful, scalable, adaptable open tape format created by technology providers Certance (now part of Quantum), HP, and IBM Corporation to help meet the growing demands of data protection in the midrange to enterprise-class server environments. This ultra-high capacity generation of tape storage products is designed to deliver outstanding performance, capacity and reliability combining the advantages of linear multi-channel, bi-directional formats with enhancements in servo technology, data compression, track layout, and error correction.

The LTO Ultrium format has a well-defined roadmap for growth and scalability. The roadmap represents intentions and goals only. There is no guarantee that these goals will be achieved. Independent compliance verification is vital to meet the free-interchange objectives that are at the core of the LTO Program. Ultrium tape mechanism and tape cartridge interchange specifications are available on a licensee basis. For additional information on LTO technology, visit the LTO Program Web site at [www.ultrium.com](http://www.ultrium.com).

Note: Linear Tape-Open, LTO, the LTO logo, Ultrium, and the Ultrium logo are trademarks of Certance , HP and IBM in the US and other countries.

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