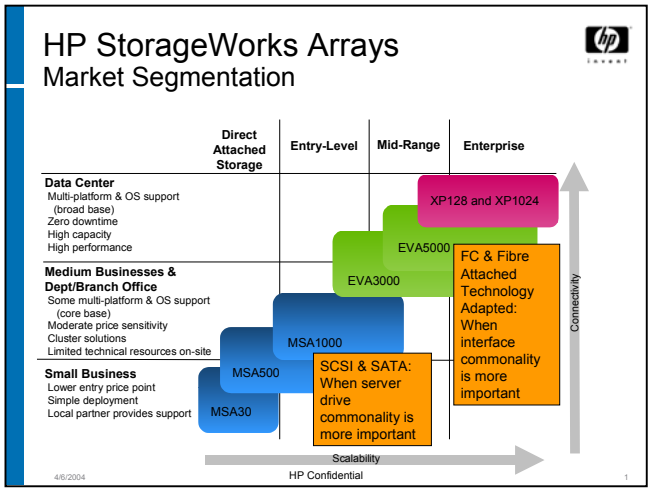
# Hewlett Packard– April 2004

## *HP Introduces Fibre Attached Technology Adapted Disk*

### What's New?

Hewlett Packard has introduced a new "hybrid" disk drive, intended to provide users with a cost effective and operationally efficient alternative to FC disk drives. The new disk drives are less expensive than FC drives and has a FC front end which enables users to easily integrate the disks into existing Enterprise Virtual Arrays (EVA). Because these disk drives are a hybrid, HP is calling them Fibre Attached Technology Adapted drives.

Of course the question is, why does the market need another drive? Is there really a benefit to having an alternative to FC, PATA and SATA drives? Certainly HP thinks so, and at ESG we believe there are a number of benefits to having the new hybrid drive as an alternative to FC, PATA and SATA (ATA). End users now have the option to integrate lower cost disk into their existing HP EVA 3000 and EVA 5000 arrays, without having to make any additional physical changes to the array, while still realizing the operational benefits of the EVA solutions. More importantly, there are no hidden costs, such as the need to add a new disk shelf or the need for a new storage controller.




### What's Different?

The Fibre Attached Technology Adapted drives have a dual port, 2 Gb/s FC interface with 250GB of capacity. The dual port interface provides a level of reliability and availability that a serial interface cannot provide. Although HP has not yet published actual performance results, they have indicated that, in most cases, there is a slight performance edge over ATA. Although ESG Labs has not tested the performance of the drive to date, we believe that the dual port FC interface lends credibility to the claim that performance would be better than SATA or PATA.

The hybrid drives also have a number of "enterprise class" reliability features built in; making them more resilient than ATA drives. The new drive supports FC protocol native data integrity and error event handling capability. In addition, these drives support Self-monitoring, Analysis and Reporting Technology (SMART) capability.

### Benefits of Fibre Attached Technology Adapted Disks

Today, users have employed ATA disk for data protection purposes, using ATA arrays as a target for backups in order to reduce the backup window and decrease recovery times. In addition, there is a movement to use ATA disk in tiered storage schemas, where more important data is stored on FC disk, and "less critical" data is stored on ATA drives. The basic premise is data that is deemed more important to the business should be stored on higher performing, highly reliable resources. By storing the less critical information on resources that do not have the same performance and reliability specifications, yet cost less than a FC drive, the company will lower their overall operational and capital costs.

All this makes perfect sense, however reliability and performance are not only about the disk drive. Those features are also highly dependent on the array the drives are housed in, as there are certain software and hardware features that make the system more efficient. Because of this, vendors have begun to support both higher performing FC disks and lower cost ATA disks in the same array. In that way, the ATA drives can benefit from the performance, reliability and operational features of the system, but still drive down overall costs.

HP's new hybrid FATA drives can be deployed in this scenario; however there is no need for any hardware changes to the array in order to utilize the new drives. In other vendor implementations, a different and separate drawer is required to house the PATA or SATA drives. Because the new drives will use the same FC front end, the drives can reside next to existing FC drives. HP will support the hybrid drives in the EVA 3000 and EVA 5000 systems; users that have spare slots in an existing EVA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can buy the lower cost hybrid drives, place them in the spare slots, and begin to implement a tiered storage infrastructure. A quick software upgrade is required to enable the EVA to recognize the type of disk and enforce specific policies associated with the disk type. With the software upgrade, features like Business Copy and Continuous Access will be available for both FC and hybrid disks.

Of course the FC front end is not the only difference between Fibre Attached Technology Adapted drives and ATA drives (SATA and PATA). These hybrid drives have better performance and better data availability than ATA. This drive opens up new levels of flexibility for tiered storage schemas. Who says there should only be two choices, FC or ATA? A third possibility, a FC hybrid disk, gives users a possible "mid-tier" level of tiered storage.

For example, say a user has an EVA system with FC drives, and a MSA with ATA drives. Before the hybrid drive, the user could have implemented a tiered storage schema, where all data base information was stored on the EVA FC disk, and all email was stored on the lower cost ATA based array. However, the company is subject to certain regulations, and management decides that certain users email is extremely important and requires better performance and reliability than the ATA drives can deliver. However, the organization is very cost conscious, and prefers not to have to store the data on the higher cost FC drives. In this scenario, the storage administrator could utilize the hybrid drives in the EVA, storing the designated email on those drives. The performance and accessibility would be better than ATA, yet the overall costs would be lower than if the data were stored on the FC disk.

## The Bottom Line

This was a surprising move from HP, but one we think will pay off for them. HP has developed a flexible, low cost yet reliable alternative to FC drives. We do not believe this will replace the need for ATA, we believe ATA drives are a perfect fit for D2D targets and have their place in tiered storage applications. However, with the advent of the hybrid disks users now have another option. Users looking to lower their disk costs while maintaining the reliability and taking advantage of the features of the EVA solutions can move to the hybrid drives. The ease of implementation makes the hybrid drives much more attractive than moving to ATA.

HP is now offering one of the more flexible portfolios of storage systems on the market. HP users can implement multiple tiers of storage, which enables them to reduce overall storage costs while still providing the levels of performance and reliability that align with their business needs. Fibre Attached Technology Adapted disk is a great addition to their storage portfolio.

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