HEPiX Spring 2024 Workshop



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Future of Hard Drives

Tuesday 16 April 2024 10:15 (25 minutes)

Most data center data is stored on hard drives. But can they compete in the future, and what is the role and future of hard drives and the different hard drive technologies available? The challenge is efficiently scaling storage infrastructure while optimizing for write/read performance, TCO, and sustainability goals.

In this session, we will explore how areal density and the latest hard drive technology deliver on Scale, TCO, and Sustainability to manage the data explosion. We will also discuss key technology features and hard drive innovations that mark an inflection point for hard drive storage.

Until now, it was not possible to increase capacity without increasing form factor and using more resources. Culminating in a breakthrough collection of Nobel Prize-winning nanoscale technologies, Mozaic $3+^{TM}$ is a new hard drive platform that incorporates the unique implementation of Heat Assisted Magnetic Recording (HAMR).

Its high magnetic coercivity media overcomes magnetic instability to deliver unprecedented areal density of 3TB per platter (4TB+ and 5TB+ in the coming years) and capacity points of 30TB and beyond.

Use it like a regular hard disk drive; written data will never fluctuate—it can only be rewritten with its plasmonic writer, ensuring data durability and achievability on hard drives.

This session will also include a live demo of the latest Mozaic 3+ hard drives.

Desired slot length

Speaker release

Yes

Author: Mr BERGMANN, Hugo

Presenter: Mr BERGMANN, Hugo

Session Classification: Storage and file systems

Track Classification: Storage & Filesystems