

Keynote: The Future of Tape

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Today, magnetic tape is the lowest cost technology for storing large volumes of data. Historically, areal density scaling has been the main driver of the exponential decrease in cost, i.e. cents/GB of capacity, of both tape and hard disk drives. Recently, HDD scaling has stagnated while tape continues to scale at historical rates. The INSIC 2019-2029 Tape Technology Roadmap projects that tape areal density will scale with a 40% compound annual growth rate enabling an approximate doubling of capacity every two years until at least 2029, at which point tape systems are expected to reach an areal density of 278 Gb/in². The feasibility of these projections have been validated by a recent research single channel tape areal density demonstration of 317 Gb/in² on SrFe tape. This demo as well as the latest tape technology roadmap will be discussed and contrasted with hard disk drives.

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