

Heat and Drive

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Where Does Power Go?

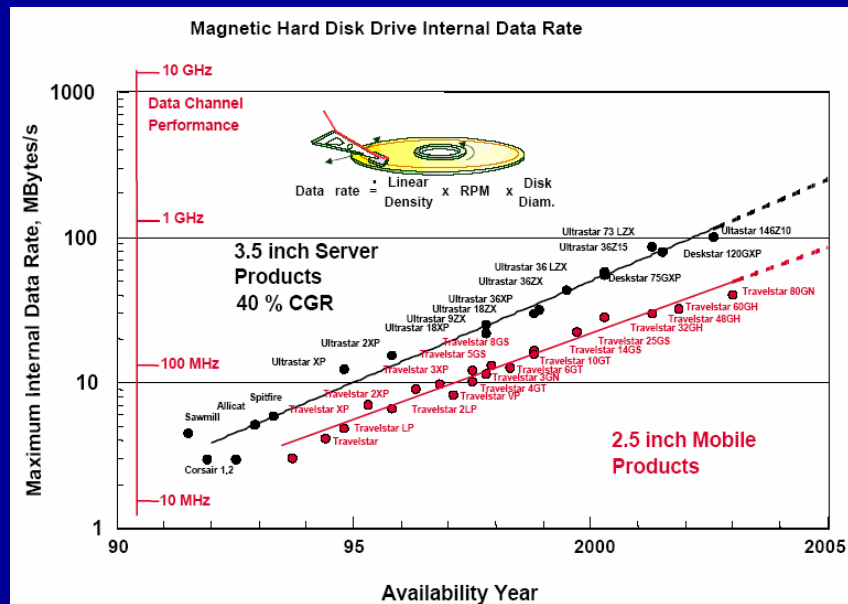


Spindle
Motor
(SPM)

Voice-Coil
Motor
(VCM)

Temperature Affects Disk Drive Reliability

- Heat-Related Problems
 - Data corruption
 - Higher off-track errors
 - Head-crashes
- Hard disk operating **5 C** above normal temperature **10-15%** more likely to fail
 - ☞ Disk drive design constrained by the **thermal-envelope**
 - Puts a limit on drive performance



Source: Hitachi GST Technology Overview Charts,
<http://www.hitachigst.com/hdd/technolo/overview/storagetechnology.html>

