

SMART HARD DISK MONITORING

S.M.A.R.T. stands for Self-Monitoring, Analysis and Reporting Technology System. Using S.M.A.R.T. technology, virtually any intelligent component or device within a computer can communicate its predicted reliability status to its user and system administrator to provide comprehensive protection that can prevent system downtime, productivity loss, and even the loss of valuable data. Quantum disk drives incorporate a suite of advanced diagnostics that monitor the internal operations of a drive and provide an early warning for many types of potential problems. Assuming that SMART is working properly on your drive it sounds like you should replace the drive ASAP. There's a program called Drive Copy that will allow you to copy the contents of your hard drive to a new one.

The things that SMART checks:

(Running SCANDISK will not show some of these types of problems.)

Disk Drive Reliability Predictors

Type of FailureSympton/CausePredictor

Excessive bad sectors Grown defect list, media defects, handling damage

Number of defects, growth rate

Excessive run-out Noisy bearings, motor, handling damage Run-out, bias force diagnostics

Excessive soft errors Crack/broken head, contamination High retries, ECC involves

Motor failure, bearings Drive not ready, no platter spin, handling damage

Spin-up retries, spin-up time

Drive not responding, no connect Bad electronics module None, typically catastrophic

Bad servo positioning High servo errors, handling damage Seek errors, calibration retries

Head failure, resonance High soft errors, servo retries, handling damage

Read error rate, servo error rate

Revised 5/30/2009 JMM