

ADAPTIVE ZONE FREQUENCY COMPENSATION FOR DISC DRIVES

ABSTRACT OF THE DISCLOSURE

5 A recording surface is segmented into a plurality of radial zones each containing a plurality of concentric tracks on which data may be recorded. The recording surface is initially formatted with a data frequency for each zone such that all of the zones have substantially the same data density. The data frequency is reduced for a first zone whose
10 error rate is initially less than the predetermined error rate so that the first zone exhibits an error rate meeting the predetermined error rate. The data frequency for a second zone whose data transfer error factor initially exceeds the predetermined error rate is increased to restore any loss of storage capacity of the recording surface due to the reduced data
15 frequency in the first zone. As a result, the data density in the first zone is substantially less than a nominal data density and the data density in a second zone is substantially greater than the nominal data density. The data storage capacity of the recording surface is at least as great as a minimum data storage capacity.

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FIG. 1