TECHNIQUES FOR MULTITRACK POSITIONING AND CONTROLLING ERROR GROWTH IN SELF-SERVOWRITING SYSTEMS

ABSTRACT

A technique, including a method and associated system (10), for multitrack positioning during self-servowriting on a storage medium (20), and for controlling error growth as the servowriting steps across the storage medium (20). Readback amplitudes of multiple bursts from previously written tracks are combined using a parabolic interpolation relationship, for positioning when writing bursts on a subsequent track. This technique is especially useful for systems in which the read element is separated from the write element in the direction in which the servowriting steps across the medium. Also disclosed is an associated technique for controlling error growth, in which a reference waveform is derived and stored for use when writing subsequent tracks. The individual reference adjustments resultant from the multitrack positioning signal are combined in a weighted sum which controls error growth when the weights are calculated properly, as disclosed herein.

Fig. 5