

DUAL ELEMENT HEAD WITH RADIAL OFFSET OPTIMIZED FOR MINIMAL
WRITE-TO-READ TRACK ERROR

ABSTRACT

A dual read/write head (304) for a direct access storage device (DASD) positions the read and write elements relative to each other such that the same servo track (310) can be used for read and write operations at the disk outside diameter (OD). Different tracks are used for positioning both elements in the same track as head moves toward the disk ID. The STW TMR portion of the total TMR at the OD is minimized to zero, so that the total TMR at the OD is primarily a function of the conventional WW TMR and WR TMR components. The STW TMR increases as the head assembly moves towards the ID, so that the total TMR at the ID becomes a function of the STW TMR and remaining TMR components. As the compensation error component of total TMR is smaller at the ID than the OD, known signal processing methods can easier be applied.

FIG 5