

**ABSTRACT****A METHOD AND APPARATUS FOR DYNAMICALLY MEASURING THE FULL  
FLYING STATE OF A SLIDER**

A method for dynamically measuring the spatial orientation of a slider use in a  
5 magnetic disk drive operates by directing a light beam through a microscope to a  
slider-disk region between the slider and the magnetic disk. A light beam reflected  
from the slider-disk region is used to derive information concerning the distances  
between the surface of the magnetic disk drive and multiple spaced points on the  
slider so that a determination of the spatial position of the slider can be  
10 determined. This can be done by determining the ratio of the relative intensities of  
different wavelengths or vectors of polarisation in the incident light beam. The  
number of measured points on the slider is at least equal to the number of  
degrees of freedom of the slider so that the spatial position of the slider can be  
fully determined.

15 (Figure 2)