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(54) Title: ASSESSMENT OF TOPOGRAPHIC SEMI-MERIDIAN PARAMETERS FOR CORNEAL ASTIGMATISM ANALYSIS AND VECTOR PLANNING TREATMENT

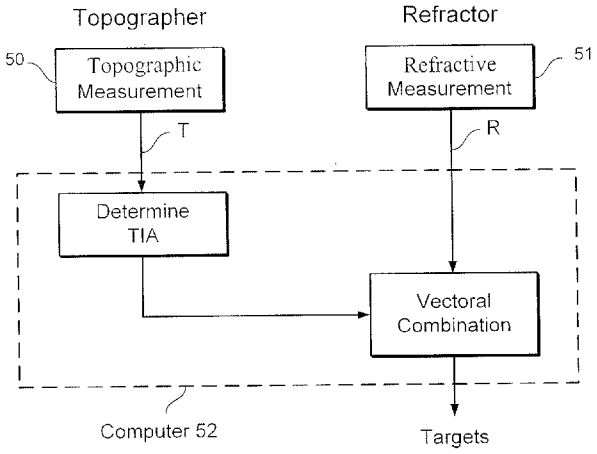


FIG. 17

(57) Abstract: Techniques are disclosed in which a topographic parameter is determined in each semi-meridian of the eye by considering the topography in each of three concentric zones from the central axis at 3mm, 5mm, and 7mm and assigning weighting factors for each zone, By selectively treating the weighted values in the three zones, parameters of magnitude and meridian can be obtained for each semi-meridian. From these parameters, a single topographic value for the entire eye (CorT) can be found as well as a value representing topographic disparity (TD) between the two semi-meridians. The topography values for the semi-meridians are used in a vector planning system to obtain treatment parameters in a single step operation.