Title (en)

SPECKLE SIZING AND SENSOR DIMENSIONS IN OPTICAL POSITIONING DEVICE

Title (de)

SPECKLE-BEMESSUNG UND SENSORDIMENSIONEN IN EINER OPTISCHEN POSITIONSBESTIMMUNGSEINRICHTUNG

Title (fr)

CALIBRAGE DE TAVELURES ET DIMENSIONS DE CAPTEUR DANS UN DISPOSITIF DE POSITIONNEMENT OPTIQUE

Publication

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Application

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Abstract (en)

[origin: WO2005114097A2] One embodiment relates to an optical displacement sensor for sensing transverse displacement of a data input device relative to a surface by determining displacement of optical features in a succession of frames. The sensor includes at least a coherent light source (306), illumination optics (308) to illuminate a portion of the surface (304), imaging optics (310), and a first array (302) of photosensitive elements having a periodic distance. The illuminator and the detector are configured to produce on the first array (302) of photosensitive elements an intensity pattern of light reflected from the illuminated portion of the surface. The intensity pattern comprises a plurality of speckles having an average speckle diameter which is between one half and two times the periodic distance of the array (302).

IPC 8 full level

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