

ABSTRACT

A mechanical arm control method and device based on monocular vision positioning are provided. Pixel coordinates of a target point of a target object in a pixel coordinate system are obtained. A homogeneous transformation matrix of a camera coordinate system relative to an end of a mechanical arm and a homogeneous transformation matrix of the end of the mechanical arm relative to a world coordinate system are used for transformation, to obtain a line-of-sight linear equation. In the world coordinate system, a plane equation of a plane where the target point is located is obtained. According to the line-of-sight linear equation and the plane equation, world coordinates of the target point are obtained. Thus, compared with the prior art, in implementations of this application, there is no need to set two monocular cameras, which can achieve a simplified positioning system and convenient operations. Furthermore, comparison of image feature points and calculation of an optimal distance are not involved, which simplifies a processing algorithm and reduces requirements for hardware equipment.

Fig. 1