

Abstract

Embodiments of the present disclosure provide a localization and tracking method, a localization and tracking platform, a head-mounted display system, and a computer-readable storage medium. The method includes that: one or more images of odd frames that are collected with a preset first exposure duration by one or more tracking cameras arranged on a head-mounted display device as well as one or more images of even frames that are collected with a preset second exposure duration by the one or more tracking cameras arranged on the head-mounted display device are acquired, the one or more images of even frames at least containing blobs corresponding to multiple luminous bodies arranged on a gamepad, and the gamepad being in communication connection with the head-mounted display device (S201); Degree of Freedom (DoF) information of the head-mounted display device is determined according to the one or more images of odd frames and attitude information of the head-mounted display device (S202); and DoF information of the gamepad is determined according to the one or more images of even frames, attitude information of the gamepad, and the DoF information of the head-mounted display device (S203).