

液晶与显示 2013, (1) 64-70 ISSN: CN:

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器件物理及器件制备技术

基于光学的真三维触控定位与识别方法研究

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摘要： 通过介绍真三维显示技术与无标记空间定位原理,提出了真三维两点触控实现方法,搭建了真三维两点触控定位与识别系统。针对真三维空间定位绘制、空间两点跟踪和手势识别问题,研究了真三维两点触控交互方法。实验证明,在不需佩戴任何标记和传感器的条件下,基于光学的空间两点触控方法与系统能够满足真三维显示的人机交互要求,且环境光的变化不干扰人机交互的操作。

关键词： 真三维 光学触控 空间定位 手势识别

True Three-Dimension Touch Method for Orientation and Recognition Based on Optics

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Abstract: A two-point touch method for three-dimension space is proposed through introducing true three-dimension display and unmarked spatial orientation, while a two-point touch for true three-dimension display system is built. Interactive approach, which offers the solution of spatial orientation, tracking and gesture recognition, has been considered. Demonstrated in the experiments, optical-based two-point touch system meets the needs of human-computer interaction without any markers and sensors and changes of ambient light does not interfere with the operation of the human-computer interaction.

Keywords: true 3D optical touch spatial orientation gesture recognition

收稿日期 2012-09-02 修回日期 2012-10-17 网络版发布日期

基金项目:

上海市教育委员会科研创新项目(No.12YZ008)

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