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(71) 申请人: 京 东 科 技 控 股 有 限 公 司
(JINGDONG TECHNOLOGY HOLDING CO., LTD.)
[CN/CN]; 中国北京市大兴区北京经济技术
开发区科创十一街 18 号 C 座 2 层 221
室, Beijing 100176 (CN)。

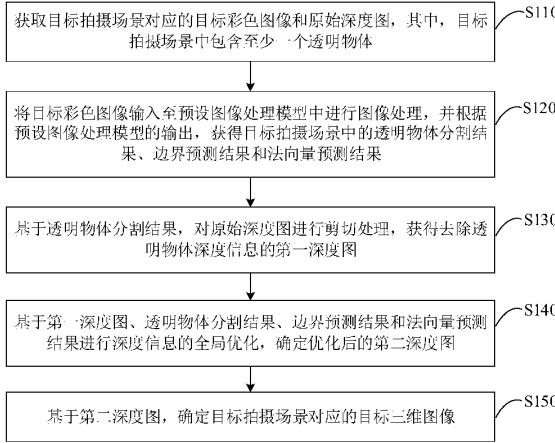
(72) 发明人: 陈越(CHEN, Yue); 中国北京市大兴区北京
经济技术开发区科创十一街 18 号 C 座 2 层 221 室,
Beijing 100176 (CN)。 李律松(LI, Lv song); 中国北
京市大兴区北京经济技术开发区科创十一街 18
号 C 座 2 层 221 室, Beijing 100176 (CN)。 梅涛(MEI,
Tao); 中国北京市大兴区北京经济技术开发区科创
十一街 18 号 C 座 2 层 221 室, Beijing 100176 (CN)。

(74) 代理人: 北京品源专利代理有限公司(BEYOND
ATTORNEYS AT LAW); 中国北京市海淀区莲花池
东路 39 号西金大厦 6 层, Beijing 100036 (CN)。

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(54) Title: THREE-DIMENSIONAL IMAGING METHOD AND APPARATUS, DEVICE, AND STORAGE MEDIUM

(54) 发明名称: 一种三维成像方法、装置、设备和存储介质



S110 Acquire a target color image and original depth map corresponding to a target shooting scene, wherein the target shooting scene contains at least one transparent object

S120 Input into a preset image processing model the target color image to be subjected to image processing and, according to an output of the preset image processing model, obtain a transparent object segmentation result, a boundary prediction result and a normal vector prediction result in the target shooting scene

S130 On the basis of the transparent object segmentation result, perform cutting processing on the original depth map to obtain a first depth map from which transparent object depth information has been removed

S140 On the basis of the first depth map, the transparent object segmentation result, the boundary prediction result and the normal vector prediction result, perform depth information global optimization to determine an optimized second depth map

S150 On the basis of the second depth map, determine a target three-dimensional image corresponding to the target shooting scene

图 1

(57) Abstract: Disclosed in the embodiments of the present application are a three-dimensional imaging method and apparatus, a device, and a storage medium. The method comprises: acquiring a target color image and original depth map corresponding to a target shooting scene, wherein the target shooting scene contains at least one transparent object; inputting the target color image into a preset image processing model and, according to an output of the preset image processing model, obtaining a transparent object segmentation result, a boundary prediction result and a normal vector prediction result; on the basis of the transparent object segmentation result, performing cutting processing on the original depth map to obtain a first depth map from which transparent object depth information has been removed; on the basis of the first depth map, the transparent object segmentation result, the boundary prediction result and the normal vector prediction result, performing depth map global optimization to determine an optimized second depth map; and, on the basis of the second depth map, determining a target three-dimensional image corresponding to the target shooting scene.

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本国际公布:
— 包括国际检索报告(条约第21条(3))。

(57) 摘要: 本申请实施例公开了一种三维成像方法、装置、设备和存储介质。该方法包括: 获取目标拍摄场景对应的目标彩色图像和原始深度图, 其中, 目标拍摄场景中包含至少一个透明物体; 将目标彩色图像输入至预设图像处理模型中, 并根据预设图像处理模型的输出, 获得透明物体分割结果、边界预测结果和法向量预测结果; 基于透明物体分割结果, 对原始深度图进行剪切处理, 获得去除透明物体深度信息的第一深度图; 基于第一深度图、透明物体分割结果、边界预测结果和法向量预测结果进行深度图全局优化, 确定优化后的第二深度图; 基于第二深度图确定目标拍摄场景对应的目标三维图像。