

本期目录 | 下期目录 | 过刊浏览 | 高级检索

[打印本页] [关闭]

成像技术与图像处理

一种多视点视频中的对象提取方法

张倩¹, 吴妍菲¹, 安平^{1,2}, 张兆杨^{1,2}

1. 上海大学 通信与信息工程学院, 上海 200072, E-mail: anping@shu.edu.cn;

2. 上海大学 新型显示技术及应用集成教育部重点实验室, 上海 200072

摘要:

提出一种自由视点电视的对象提取方法, 首先用Birchfield算法进行快速的视差估计方法得到一个较为平滑的视差图, 然后对初始的分割结果用形态学滤波, 实验结果证明了所提出方法的有效性和可靠性。

关键词: 多视点视频 分割 视差

Multi-View Point Video Object Extraction Method

ZHANG Qian¹, WU Yan-fei¹, AN Ping^{1,2}, ZHANG Zhao-yang^{1,2}

1. School of Communication and Information Engineering, Shanghai University, Shanghai 200072, China, E-mail: anping@shu.edu.cn;

2. Key Laboratory of Advanced Displays and System Application, Shanghai University, Shanghai 200072, China

Abstract:

A new object segmentation method was presented in this paper. Firstly, a disparity estimation method was presented, which get a fast estimation result. Then, the segmentation is obtained by Morphological filtering. The experimental results verify the validity and reliability of this method.

Keywords: multi-view video segmentation disparity

收稿日期 2010-01-25 修回日期 2010-05-27 网络版发布日期 2010-08-20

基金项目:

通讯作者:

作者简介: 张倩(1983-), 女, 河北石家庄人, 博士研究生, 主要从事多视点视频编码及其应用。

作者Email: anping@shu.edu.cn

参考文献:

[1] Francois E, Chupeau B. Depth-based segmentation

[J]. IEEE Trans. on CSVT, 1997, 7: 237-239.

[2] Izquierdo E, Kruse S. Image analysis for 3D modeling, rendering, and virtual view generation

[J]. Computer Vision Image Understanding, 1998, 71(2): 231-253.

[3] Chang Yu-lin, Fang Chih-ying, Ding Li-fu, et al. Depth map generation for 2D-to-3D conversion by short-term motion assisted color segmentation // IEEE International Conference on Multimedia and Expo, Beijing, China: IEEE, 2007: 1958-1961.

[4] Cigla C, Aydin Alatan A. Depth assisted object segmentation in multi-view video // 3D TV Conference: The True Vision - Capture, Transmission and Display of 3D Video, Istanbul, Turkey: IEEE, 2008: 185-188.

[5] Thakoor N, Jean G, Devarajan V. Multihypothesis prior for segmentation of stereo disparity

[J]. IEEE Signal Processing Lett., 2008, 15: 613-616.

[6] Birchfield S, Tomasi C. Depth discontinuities by pixel-to-pixel stereo // Sixth International Conference on Computer Vision, Bombay, India: IEEE, 1998: 1073-1080.

[7] 陈胜勇, 刘盛. 基于opencv的计算机视觉技术实现

[M]. 北京: 科学技术出版社, 2008.

[8] Xu Xiu-bing, Xie Xu-dong, Dai Qiong-hai. Real-time 3D video synthesis from binocular stereo camera // 3DTV Conference: The True Vision - Capture, Transmission and Display of 3D Video, Istanbul, Turkey: IEEE, 2008: 133-136.

[9] Salembier P, Torres L, Meyer F, et al. Region based video coding using mathematical morphology

[J]. Proc. of IEEE, 1995, 83(6): 843-857.

1. 王平, 张力, 周长其. 基于种子点的粘连巨噬细胞图像的分割方法[J]. 液晶与显示, 2012, (6): 808-813
2. 丘文涛, 赵建, 刘杰. 结合区域分割的SIFT图像匹配方法[J]. 液晶与显示, 2012, (6): 827-831
3. 徐拓奇, 张刘, 徐伟, 金光. 空间目标图像的天基动态识别[J]. 液晶与显示, 2012, (3): 406-413
4. 史国凯, 王琼华, 李大海, 赵悟翔, 彭华荣, 罗江勇. 基于分割的离焦图像深度图提取方法[J]. 液晶与显示, 2012, (2): 229-234