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Interactive Object Segmentation in Two Phases

Ran Shi[a,b,*], King Ngi Ngan, Fellow, IEEE[b,c], Songnan Li, Member, IEEE[b,d], Hongliang Li, Senior Member, IEEE[c]

[a] *School of Computer Science and Engineering, Nanjing University of Science and Technology, China*
[b] *Department of Electronic Engineering, The Chinese University of Hong Kong, Shatin, Hong Kong*
[c] *School of Electronic Engineering, University of Electronic Science and Technology of China, Chengdu, China*
[d] *TCL Corporate Research (Hong Kong) Co., Limited, Hong Kong*

Abstract

This paper addresses the problem of interactive object segmentation with an input rectangle. We present a coarse-to-fine method from region-level segmentation to pixel-level segmentation. In the region-level segmentation, the best combination of adjacent refined superpixels is selected as the coarse segmentation result by measuring its global contrast and tightness degree. Subsequently, we use the coarse segmentation result to aid the construction of the energy function in the pixel-level segmentation. The result can be further refined due to the fusion of region-level and pixel-level segmentation. Experimental results demonstrate that our method can achieve better segmentation performance.

Keywords: Object segmentation, contrast, level

1. Introduction

Object segmentation is an important technique in image processing and computer vision. The performance of many applications depends on the accuracy of the segmentation result, such as image editing [1], content-based image retargeting [2] and compression [3], etc. According to input provided by users, object

*Corresponding author
Email address: rshi@njust.edu.cn (Ran Shi)

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