



RESEARCH ARTICLE

INTERACTIVE IMAGE SEGMENTATION BASED ON HARMONIC FUNCTIONS & RECONSTRUCTIONS

Alisha Abraham

Computer Science & Engineering, Calicut University, India

19alisha89@gmail.com

Abstract— This paper gives idea GRF functions instead of a graph-based algorithm for interactive image segmentation. Specifically, given a 3 X 3 local window, the colour of each pixel in it will be linearly reconstructed with those of the remaining eight pixels. The optimal weights will be transferred to linearly reconstruct its class label. This treatment is largely motivated from the manifold learning algorithm of locally linear embedding. But beyond LLE where only one data point is reconstructed in each given data neighbourhood, it will reconstruct all the pixels in each spatial window. In this process, the label reconstruction errors are estimated. The information about the user-specified foreground and background is introduced into a regularization framework. The segmentation task is finally solved via global optimization.

Key Terms: - interactive segmentation; GRF functions; LLE functions; graph based algorithm; manifold learning algorithm
