

TPA 10: Multiple Foreground Object Segmentation

August 22, 2012

Problem Statement: Segmentation of multiple foreground objects from a single image

Input: Input to the system will be

- Images containing two or more foreground objects

Expected Output:

- Segmented blobs of the prominent foreground objects

Hint for Excellence: *Special credit will be given if the developed code will be able to handle occlusion and pose variations.*

Reference

- Gunhee Kim and Eric P. Xing "On Multiple Foreground Cosegmentation", CVPR 2012.
- Das, S. K., Saha, S. K., and Mukherjee, D. P. (2012). Segmentation of multiple objects evolving conditional random field based topology adaptive active membrane. Signal Processing, 92(10), 2341-2355.
- Tao, W., and Tai, X. -. (2012). Multiple piecewise constant with geodesic active contours (MPC-GAC) framework for interactive image segmentation using graph cut optimization. Image and Vision Computing, 2012
- P. Arbelaez, B. Hariharan, C. Gu, S. Gupta, L. Bourdev and J. Malik. "Semantic Segmentation using Regions and Parts", CVPR 2012
- Sidi, I., and Belfkih, S. (2013). Texture image segmentation using A new descriptor and mathematical morphology. International Arab Journal of Information Technology, 10(2)

- Almaddah, A., Mae, Y., Ohara, K., Takubo, T., and Arai, T. (2011). Visual and physical segmentation of novel objects. Paper presented at the IEEE International Conference on Intelligent Robots and Systems, 807-812.
- de la Vega, S. H., and Manian, V. (2012). Object segmentation in hyperspectral images using active contours and graph cuts. *International Journal of Remote Sensing*, 33(24), 1246-1263.