

Combining Local and Global Cues for Closed Contour Extraction- Supplementary

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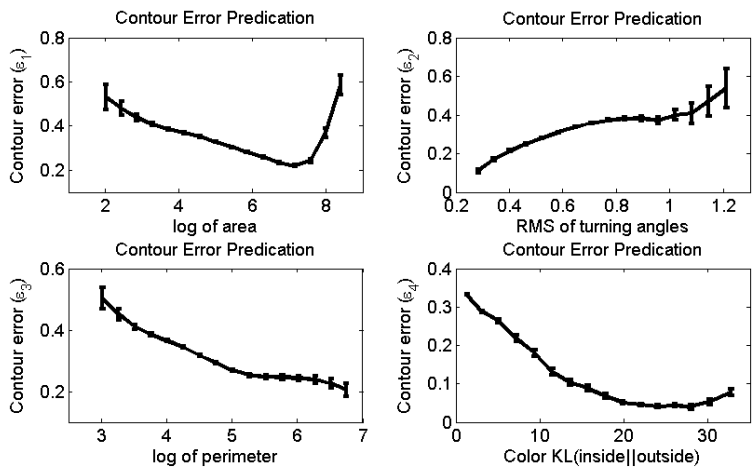


Figure 1: Learned nonparametric predictors for contour error of closed contours. Please see section 5 of the paper for the predictor cues

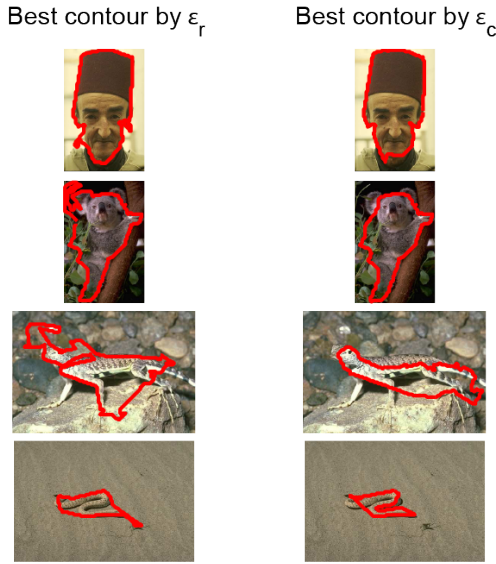


Figure 2: Examples of differences between the region-based error measure (ϵ_r) and the contour-based error measure (ϵ_c). As shown in the examples, the region-based measure is not sensitive to spikes, wiggles, and major shape differences.

The following pages contain results on 63 test images from the SOD dataset. We compared our local/global (LG) method with the Ratio Contour (RC) algorithm of Stahl & Wang [4], the Adaptive Grouping (AG) method of Estrada & Jepson [2], the Multiscale (MS) method of Estrada & Elder [1], and the Superpixel Closure (SC) method of Levinshtein & Dickinson [3], in each case using the parameters recommended by the authors.

The first column shows ground truth. Columns 2-6 show the best of 20 contours output by each algorithm. The last column shows the best overall output from our algorithm LG.

References

- [1] F. J. Estrada and J. H. Elder. Multi-scale contour extraction based on natural image statistics. In *Computer Vision and Pattern Recognition Workshop, 2006. CVPRW '06*, page 183, 2006.
- [2] F. J. Estrada and A. D. Jepson. Robust boundary detection with adaptive grouping. In *Computer Vision and Pattern Recognition Workshop, CVPRW '06*, volume 2006, pages 184–184, 2006.
- [3] A. Levinshtein, C. Sminchisescu, and S. Dickinson. Optimal contour closure by superpixel grouping. *Proceedings of European Conference on Computer Vision*, 2010.
- [4] J. S. Stahl and S. Wang. Edge grouping combining boundary and region information. *IEEE Transactions on Image Processing*, 16(10):2590–2606, 2007.

SOD



RC



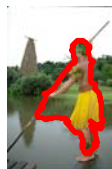
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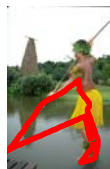
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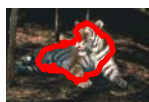
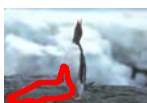
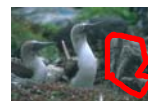
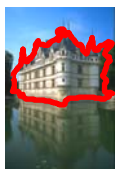
MS



LG



LG-best



SOD

RC

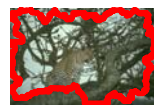
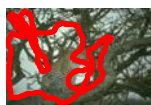
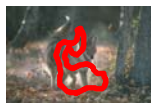
AG

SC

MS

LG

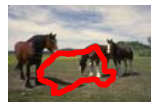
LG-best



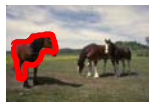
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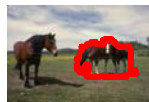
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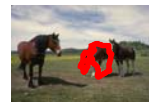
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SC



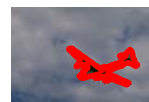
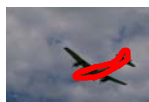
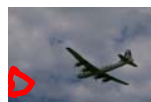
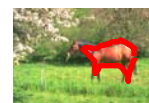
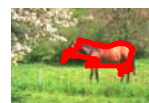
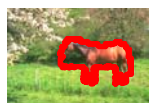
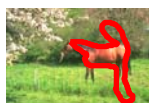
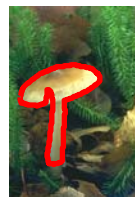
MS



LG



LG-best



SOD



RC



AG



SC



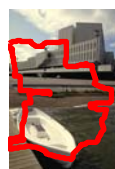
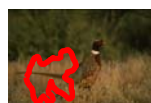
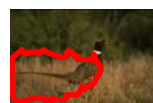
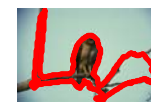
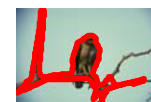
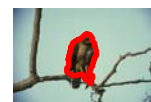
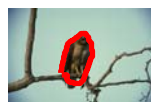
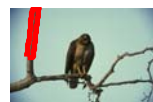
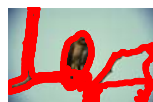
MS



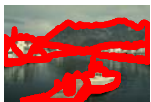
LG



LG-best



SOD



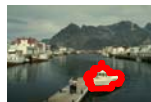
RC



AG



SC



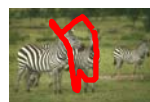
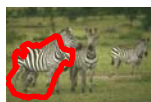
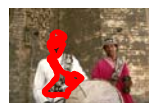
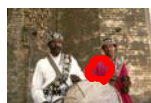
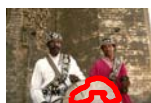
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LG



LG-best



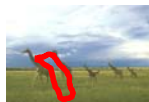
SOD



RC



AG



SC



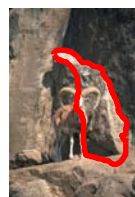
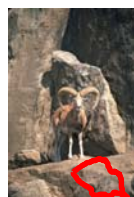
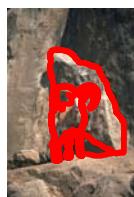
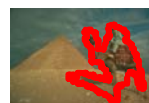
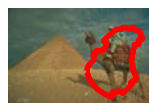
MS



LG



LG-best



SOD



RC



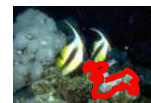
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SC



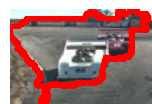
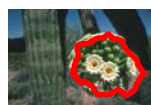
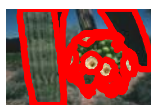
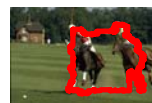
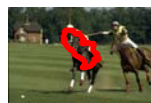
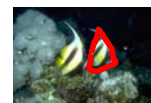
MS



LG



LG-best



SOD



RC



AG



SC



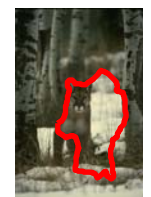
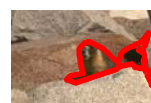
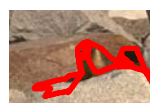
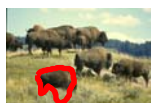
MS



LG



LG-best



SOD



RC



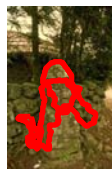
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SC



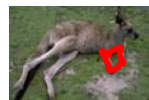
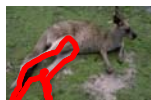
MS



LG



LG-best



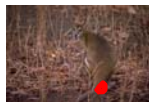
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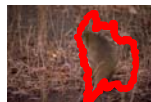
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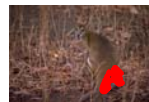
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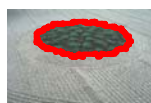
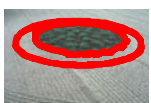
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LG



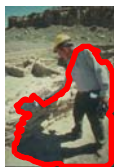
LG-best



SOD



RC



AG



SC



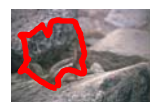
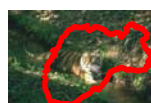
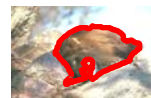
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LG



LG-best



SOD



RC



AG



SC



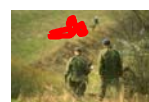
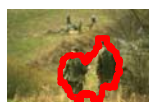
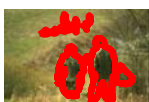
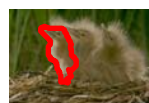
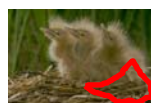
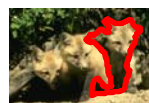
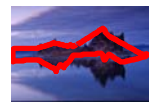
MS



LG



LG-best



SOD



RC



AG



SC



MS



LG



LG-best

