Supplemental Materials

KNN Matting



Figure 1: Using the sparse click inputs same as in nonlocal matting [2], KNN matting produces better results. Top row: clearer and cleaner boundary; middle: more details preserved for hairs as well as the red fuzzy object behind; Bottom: furs are more clearly separated from background.

References

- [1] J. Lawrence, A. Ben-artzi, C. Decoro, W. Matusik, H. Pfister, R. Ramamoorthi, and S. Rusinkiewicz. Inverse shade trees for non-parametric material representation and editing. *ACM Transactions on Graphics*, pages 735–745, 2006.
- [2] P. Lee and Y. Wu. Nonlocal matting. In CVPR, pages 2193–2200, 2011.
- [3] C. Rhemann, C. Rother, J. Wang, M. Gelautz, P. Kohli, and P. Rott. A perceptually motivated online benchmark for image matting, 2009.



Figure 2: KNN matting on material matting using the *sg* dataset. Original images at top; bottom shows sparse user input (5 clicks; one per layer) and multiple layers automatically extracted. Our result distinguishes the two different gold foil layers despite their subtle difference in materials (where they were combined in [1]).



Figure 3: KNN matting on material matting using *dove* dataset. Only one click per layer for their simultaneous extraction.



Figure 4: KNN matting on material matting using *wp1* dataset. Only one click per layer for their simultaneous extraction.



Figure 5: KNN matting on material matting using *wt* dataset. Only one click per layer for their simultaneous extraction.



Figure 6: KNN matting on material matting using *wp2* dataset. Only one/two click per layer for their simultaneous extraction.



Figure 7: KNN matting on material matting on *mask* dataset captured by us.







Figure 9: Natural Image Matting Comparison 1-7 from [3]



Figure 10: Natural Image Matting Comparison 8-14



Figure 11: Natural Image Matting Comparison 15-21



Figure 12: Natural Image Matting Comparison 22-27