Diamonds From the Rough
Improving Drawing, Painting, and Singing via Crowdsourcing

Yotam Gingold¹,²,³
yotam@yotamgingold.com
¹George Mason University
Computer Science Dept.

Etienne Vouga²
evouga@cs.columbia.edu
²Columbia University
Dept. of Computer Science

Eitan Grinspun²
eitan@cs.columbia.edu

Haym Hirsh³
hirsh@cs.rutgers.edu
³Rutgers University
Dept. of Computer Science

Drawing  Do multiple line drawings of the same object average to a better drawing?

Painting  Do multiple paintings of the same scene average to a better painting?

Singing  Do multiple singings of the same song average to be more on key?

Acknowledgements
We are grateful to Tom Malone, Greg Little, Alex Rossmarin, and Julia Hirschberg for helpful discussions, to Lara Kassoff for help with statistics, and to Jane Mills for her help with the painting portion. We also wish to acknowledge Dan Weld for recommending the book "Paths to Otherwhere" by James P. Hogan, which partially inspired this work.

This research is supported in part by the Sloan Foundation, the NSF CAREER Award CCF-06-43268 and grants IIS-09-16129, IIS-10-48948, IIS-11-17257, CMMI-11-29917, IIS-11-29917, IIS-09-16845, and generous gifts from Adobe, Autodesk, Intel, mental images, Microsoft, NVidia, Side Effects Software, and the Walt Disney Company.