(Real-Time) Gradient-Domain Painting

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1 Introduction

This project explores methods for painting in the gradient-domain described in paper by James McCann and Nancy S. Pollard[1].

In the frameworks of this project, simple GUI application that allows user to paint with gradient-painting brash will be implemented.

2 Implementation

2.1 Technologies

Application is implemented in C++ programing language with usage of the following libraries:

- **Qt framework**. Used for GUI and image processing.

- **amgcl**. Library for solving large sparse linear systems with algebraic multigrid method. It was used as a solver on the initial stages of development.

3 Outputs

4 Possible improvements

5 Conclusion

References

[1] James McCann and Nancy S. Pollard. Real-time gradient-domain painting. *ACM Transactions on Graphics (SIGGRAPH 2008)*, 27(3), August 2008.