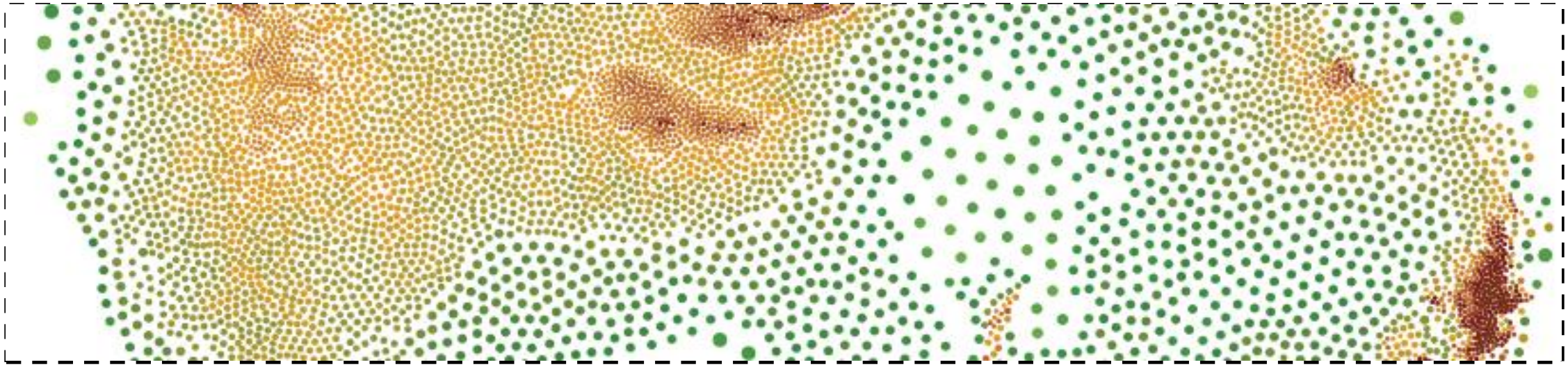


VU Visualisierung 2 (186.833)

Stippling of 2D Scalar Fields

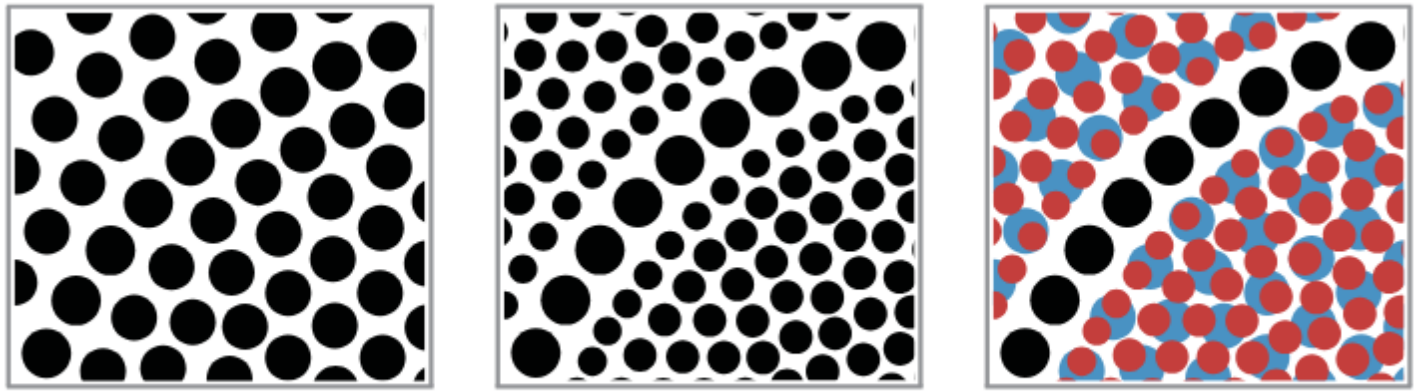
Research Paper Implementation

*David Bauer (12120495) / Dominik Kanjuh (*12433751*)*

Institute of Visual Computing & Human-Centered Technology, TU Wien, Austria

Short Article Summary

- Representing 2D data using stipples
- Linde-Buzo-Gray algorithm
- Visual abstraction using stipples of different size and density
- Emulating contour lines for emphasis
  - Restrictive stippling
  - Mach Banding



(a) (b) (c)

Concept

- Represent elevation with stipples
- Visualize rate of change
- Interactive Map -> re-compute stipples on change
  - Pan
  - Zoom
- Change settings for visualization during runtime
  - Color mapping
  - Size mapping

Implementation & Data

- Web based Implementation using OpenLayers (and WebGPU for acceleration)
- Dataset "Digital elevation data" by J. de Ferranti and C. Hoffmann
- Data structures are sets of binary files with z-values aligned to latitude and longitude

Görtler et al.

Jochen Görtler; Marc Spicker; Christoph Schulz; Daniel Weiskopf; Oliver Deussen

Stippling of 2D Scalar Fields

IEEE Transactions on Visualization and Computer Graphics, Volume: 25, Issue: 6

2009