

Total Stereo

2.5D Untertage

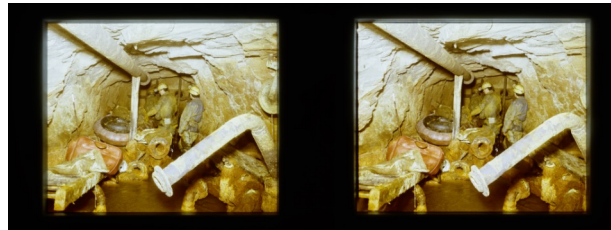
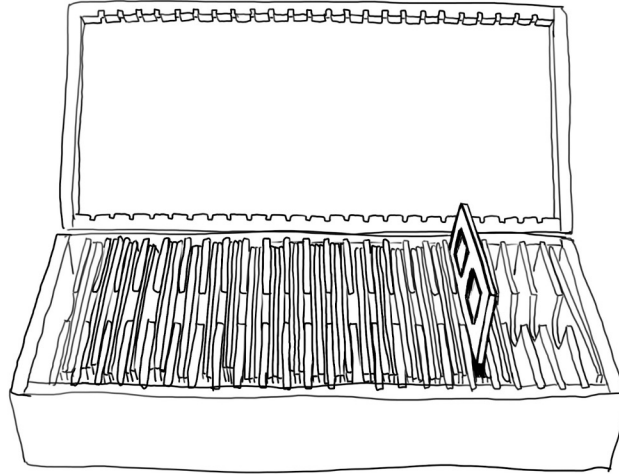
Team



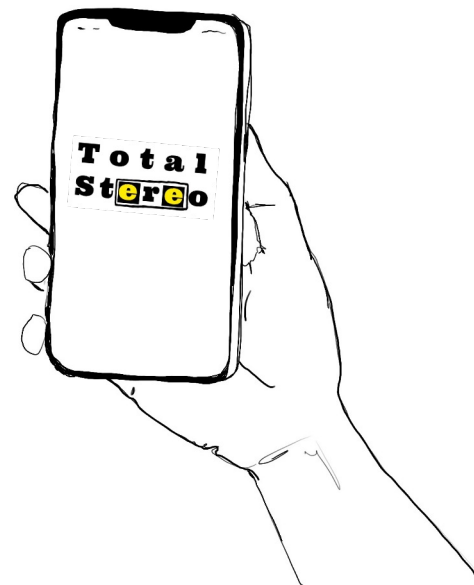
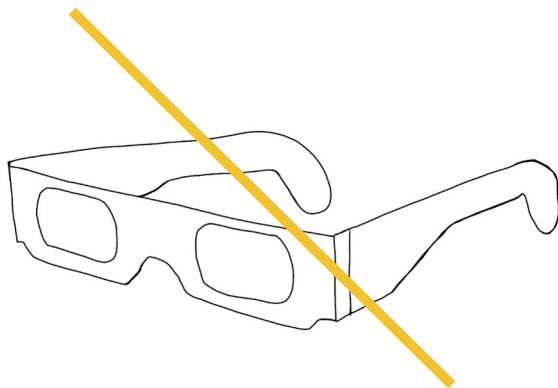
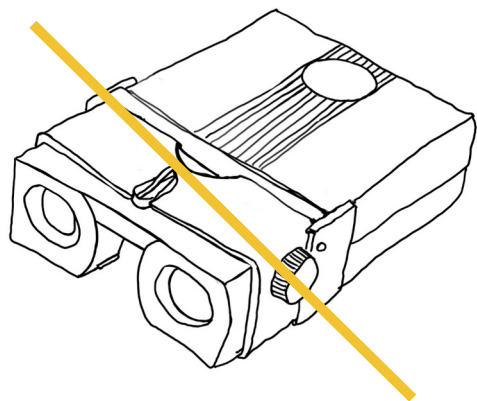
Datenset & Stereoskopie

Datenset:

- Sammlung der SAXONIA FREIBERG STIFTUNG
- 143 Stereoskopische Diaaufnahmen von Wolfgang Schreiber



Motivation



**Total
Stereo**

Ziel: 3D Photo

Gegeben:



Gesucht:



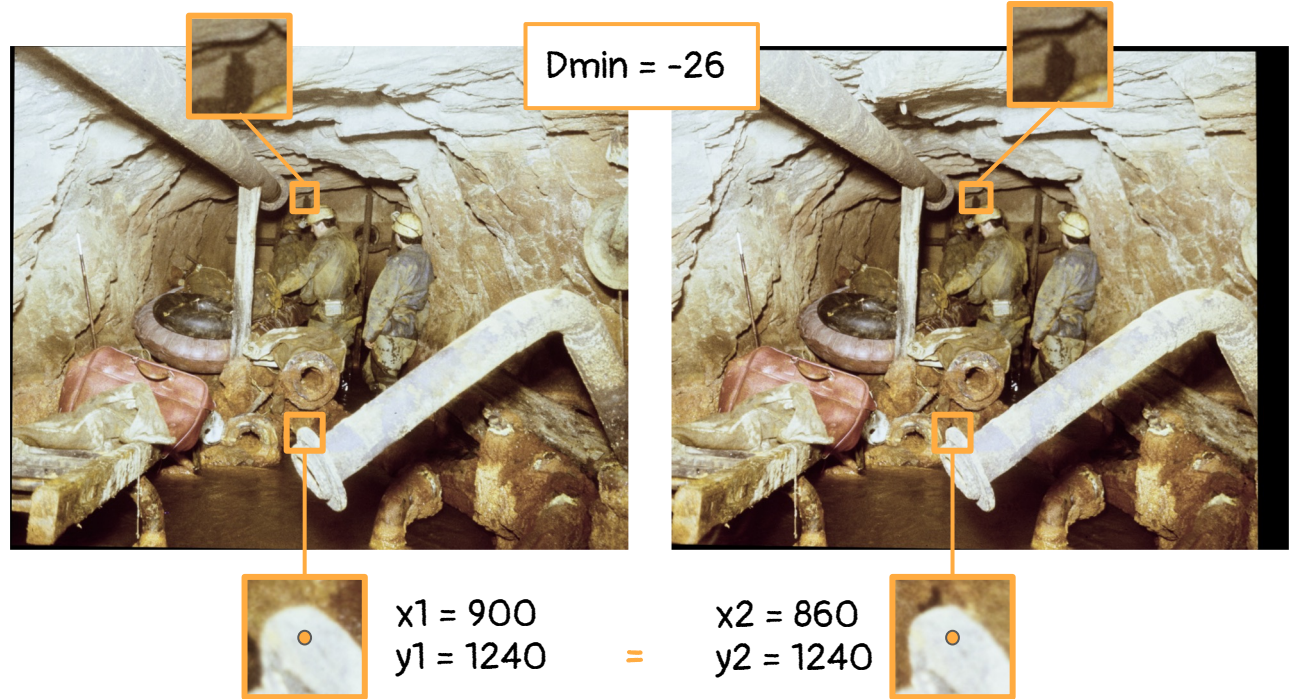
1. Schritt: Separierung der Bilder

1. Linkes und rechts Bild extrahieren
2. Herunterskalieren (Faktor 0,5)
3. Gelbanteil um 40% Reduzieren



2. Schritt Rektifizierung

1. Feature-Suche in beiden Bildern
2. Bilder ausrichten
3. Minimale und maximale Disparität ermitteln



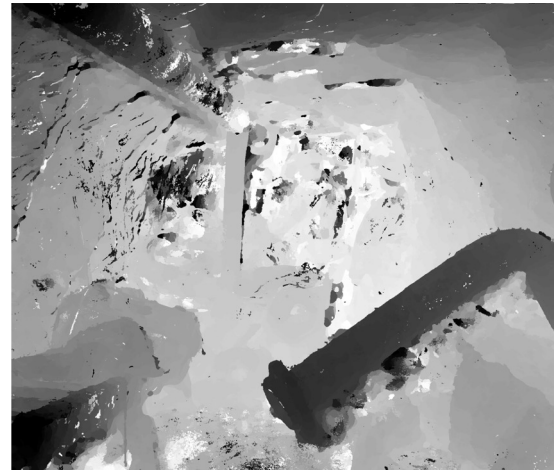
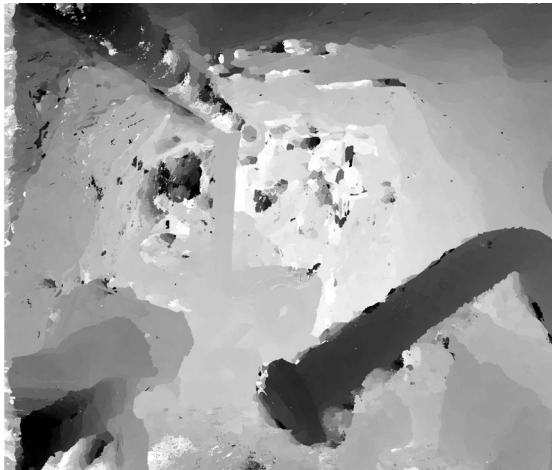
$$D_{max} = x_1 - x_2 = 40, Z \sim 1/D$$

3. Schritt Tiefenbild(er) erstellen

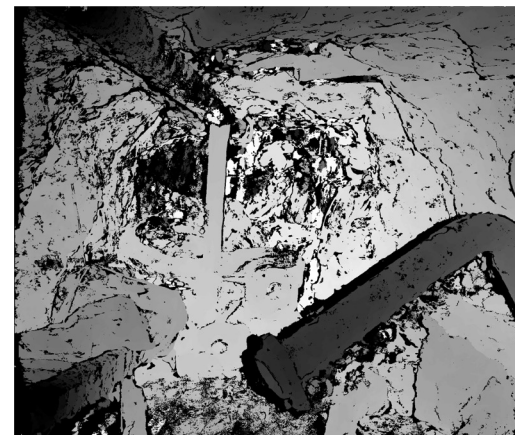
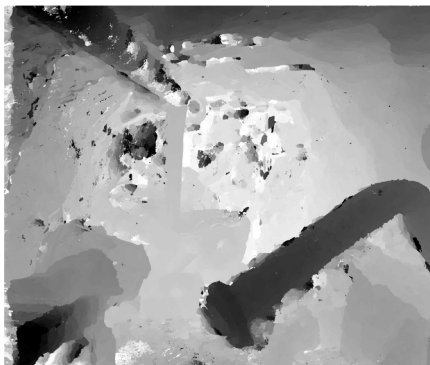
Fast Cost-Volume Filtering for Visual Correspondence and Beyond

Christoph Rhemann¹, Asmaa Hosni¹, Michael Bleyer¹, Carsten Rother², Margrit Gelautz¹

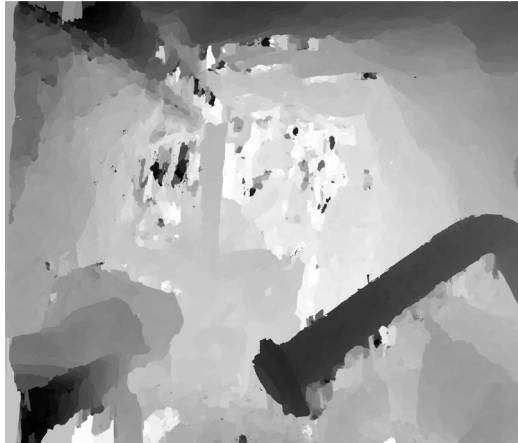
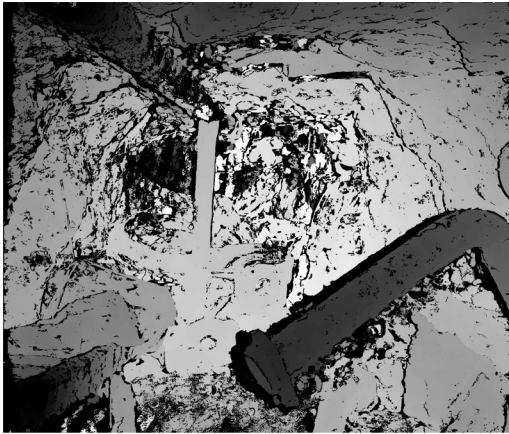
¹Vienna University of Technology, Vienna, Austria ²Microsoft Research Cambridge, Cambridge, UK



4. Schritt: Okklusionen ermitteln



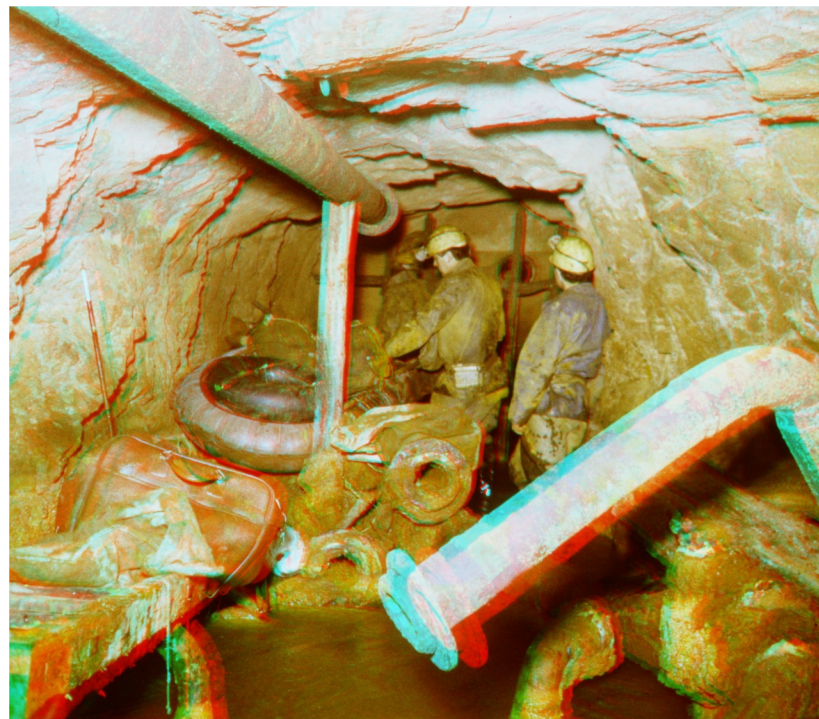
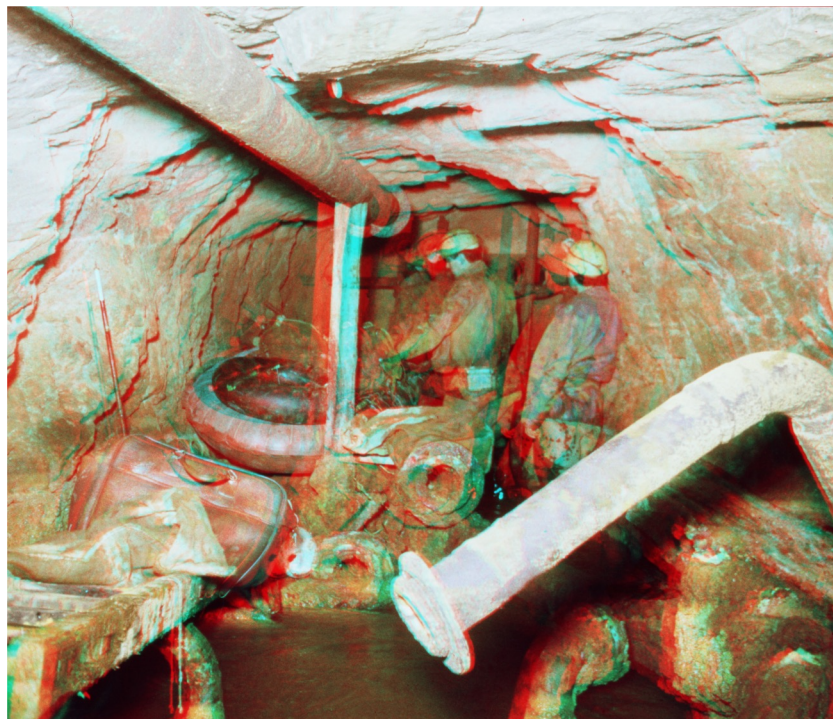
5. Schritt: Postprocessing



Präsentation: DisplacementFilter



Anaglyphenbild erstellen

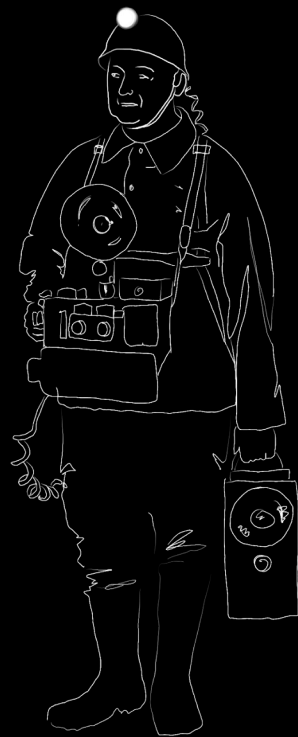


Future Work

- Upload your stereo photos
- 3D Rekonstruktion des Stollens

Demo

T o t a l
S t e r e o



Demo



**Total
Stereo**

