

PICTURE TRANSFORMATION

International Conference Graphicon 1998,
Moscow, Russia, <http://www.graphicon.ru/>

The task is to construct a map from the left picture to the right one



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Applications

- Photogrammetry
- Morphing
- Mosaic pictures

Requirements

- Exact
- Smooth
- Convertible
- Composition
- Quick

Main Ideas

- Triangulation
- Spline
- Regular grid + base points

Triangulation

- Additional points to expand the map
- Modified Delaunay triangulation
- Flip-flop algorithm

Spline

- Problems - uncertainty
- Spline of degree 4
- Estimation of derivatives

Regular grid + base points

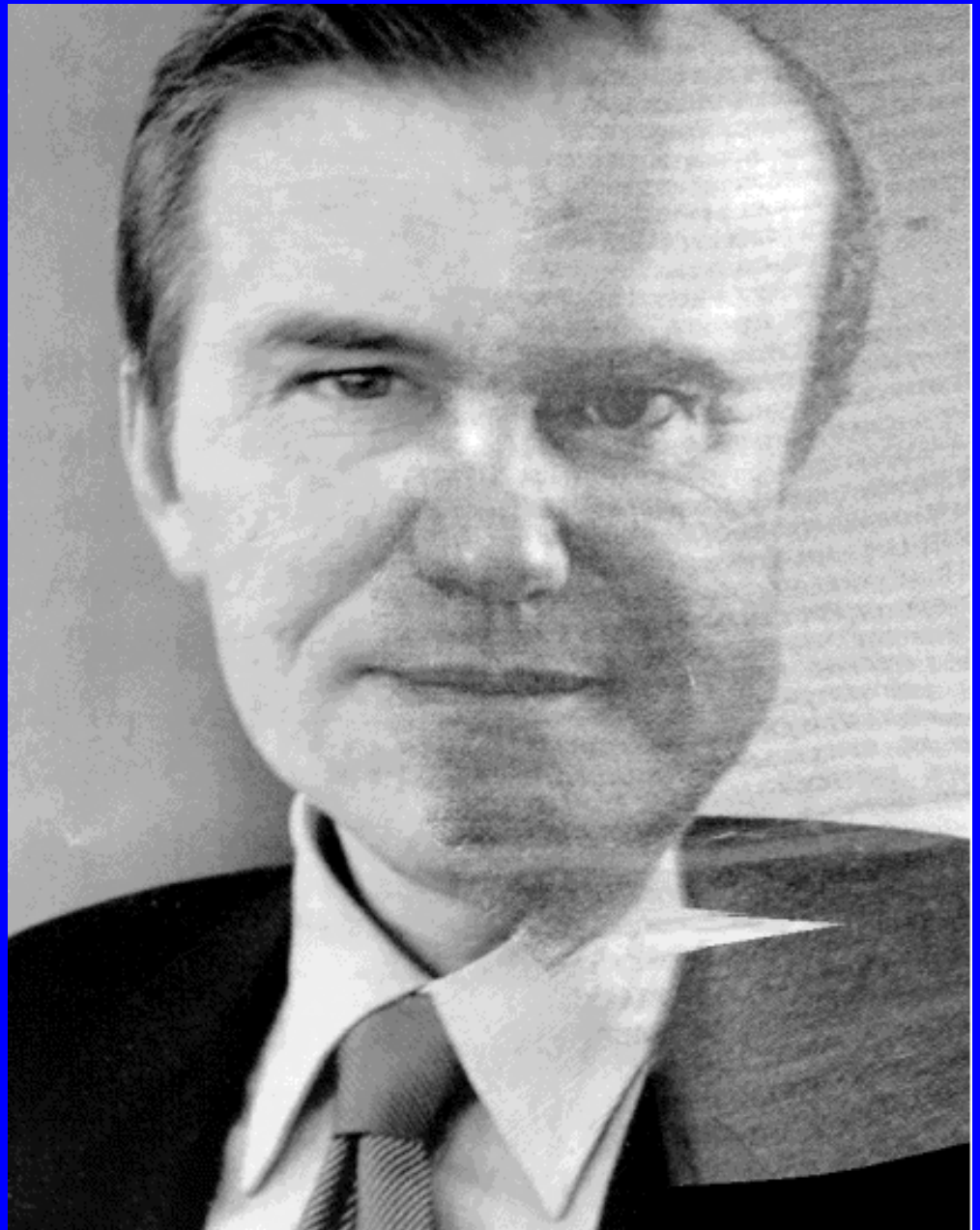
- Well-composed maps
- Quick
- Exact on base points

Map and conversion



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Combination of the pictures



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