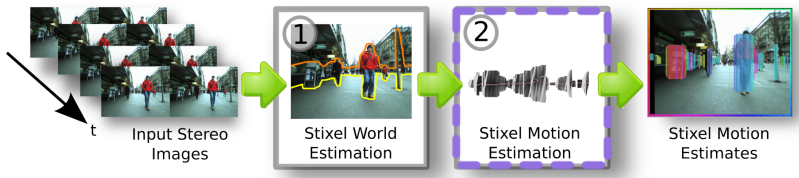# Stixels motion estimation without optical flow computation

B. Gnyel, R. Benenson, R. Timofte, L. V. Gool (ECCV 2012)

- Traditionally, motion estimation between two frames is done using optical flow methods, which are computationally expensive

- Contributions:
  - Proposes the first algorithm for stixels motion estimation without requiring the computation of optical flow. This enables much faster computation while keeping good quality
  - The stixel motion can be viewed as a matching problem between stixels in 2 frames
  - Computes matching cost matrix. Optimal motion assignment for each stixel can be solved via dynamic programming
  - Presents the first evaluation of the stixels motion quality by comparing against two baselines

- Evaluates on the "Bahnhof" sequence