

Combining Recognition-based Segmentation-based Approaches for Graphic Symbol Recognition using Deformable Template Matching

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Abstract:

In this paper we describe, analyze and compare two different approaches for the recognition of hand-drawn lineal symbols in graphics documents. Both approaches are developed upon a general framework based on deformable template matching. Deformable models allow to handle shape variability by generating deformations from a lineal model of the symbol, finding such one which best fits the input image. The difference between both approaches is the definition of the distance measure between the model and the image. In the segmentation-based approach a support measure is used while an explanation measure is the basis for the recognition-based method. Properties, advantages and drawbacks of both definitions are discussed and illustrated with their application to the recognition of hand-drawn symbols in architectural drawings.