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Abstract
Skeleton shape extraction technique was widely adopted in many application such as object modeling 、character recognition、machine vision and computer animation .The thinning process always be used in skeleton extraction, but it often distorts the local shapes of an observed pattern. This is an inherent defect for all thinning algorithms. Therefore, a Dynamic Self-Organizing Map(DSOM) was proposed to extract skeleton precisely. But the process speed of DSOM is too slow. In order to speed up the process speed, the methods of feature-points estimation and area segmentation were proposed in this paper. Feature-points estimation process estimates the position of output neurons instead of random decision. The area segmentation process avoids the fault when DSOM used in crossing or loop pattern. In the experimental results, the tools、alphanumeric and Chinese characters are used as test patterns. The results show that the proposed methods improve the process speed of DSOM and it wouldn’t distort the local shapes of an observed pattern.
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