INDERSCIENCE

The online platform for Inderscience Publishe

Home   Browse   Inderscience Publishers   Subscribe   Authors   Librari

Our site will be undergoing scheduled maintenance on 24th January from 11pm GMT for up to 4hrs. We apol

Enter words / phrases / DOI / ISSN / authors / keywords / etc.   This Journal   Search

**Intern
Comp
and T**

Dimension-reduction technique for polygons

Yogesh H. Kulkarni   , Anil Sahasrabudhe   , Mukund Kale

Abstract   PDF

Abstract

Applications such as pattern recognition, shape matching, finite element analysis need lower dimensional representation of a higher dimensional shape. Skeleton provides such one dimensional representation for a 2D or 3D shape. It can be computed for various types of inputs, such as images, solids, sketches. Although there are various methods available for computation of the skeleton, their appropriateness depends on the requirement posed by their applications. Some focus on exact computation, some are approximate, some aim at faithful backward-reconstruction; whereas some focus at proper representation for human perception. This paper focuses on a method for creation of a particular type of skeleton, called Midcurve (a skeleton that lies at the midway of a shape) for planar polygon. This method is based on the Divide-and-Conquer strategy and works in two phases - decomposition and midcurve creation. Towards the end of the paper some test case results are presented along with the conclusions.

Keywords: midcurves, polygon decomposition, skeleton, dimension reduction, planar polygons

- Cur
- List

Article /

Add to F

Related