

# A generic shape decomposition

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**Abstract :** This paper presents a new technique for decomposing a binary shape which provides a hierarchical description of the shape. Associated to the decomposition, a hierarchical reconstruction procedure enables to recover the general aspect of the object as well as its exact original shape. A mathematical modeling of the procedure allows us to demonstrate that the reconstruction is exact. Simulation results show the efficiency of this technique and underline its stability against noise document.

**Keywords :** Object Decomposition, Hierarchical Representation, Mathematical Modelization