

Synthetic Surrealism

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Abstract

1 Introduction & Background

Given a set of patterns

In developing an approximation framework for computing canonical sets,

2 Problem Formulation

In this section we define the notion of canonical set. This combinatoric problem is unfortunately intractable. We therefore present a series of steps (integer programming, quadratic programming, semidefinite programming, and finally rounding) that allow us to compute good approximate solutions in polynomial time.

2.1 Definitions

3 Summary and Future Work

We have developed an approximation framework for the canonical set problem based on SDP relaxation of an integer programming formulation. Through a series of experiments we evaluated this framework in the context of 2D view simplification of 3D objects. Our results compared favorably to exhaustive search.

References



Figure 1: Motivation: Given the 3D model in (a) and a set of views in (b), and similarity function among the views, identify a small subset of views that best characterizes the object. The boxed views represent the canonical set obtained through our algorithm.