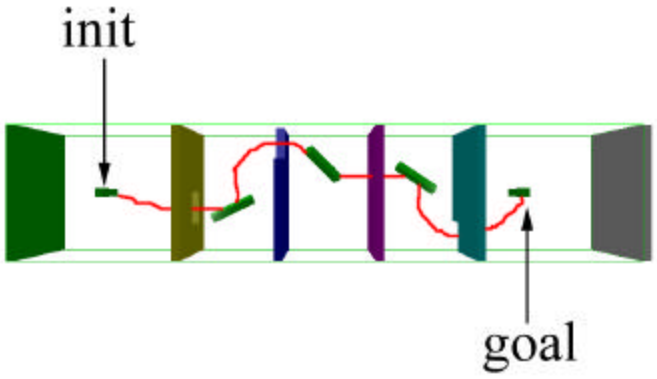

Plate 1: A narrow box robot passes through a series of walls containing square holes. Global information about this workspace, provided by our voronoi computation, allows our planner to quickly find a path through the walls. The obstacles in the scene contain a total of 216 polygons.

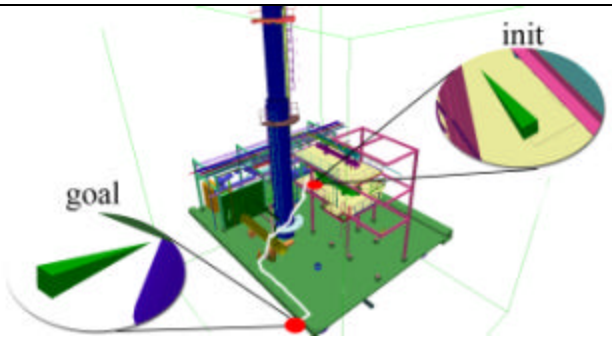

Plate 2: A narrow dart shaped robot plans a path through a complex industrial environment. This environment contains 127,216 polygons.

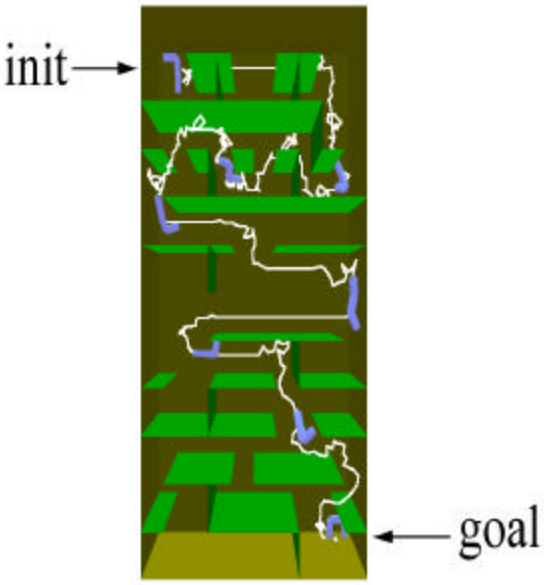

Plate 3: A two joint robot with 3 elongated box linkages navigates a maze environment. The robot is composed of 18 polygons, while the environment has 92 polygons. The size of the robot in relation to the scene would make this an extremely difficult scenario if the robot was rigid. Thus our framework obtains a significant speedup by taking advantage of the robot's joint degrees of freedom.

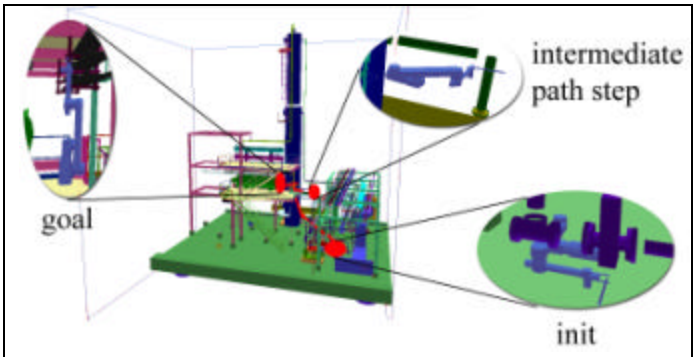

Plate 4: A four joint complex mechanical part moves through an industrial environment. This environment has 127,216 polygons, while the moving part contains 688 polygons. The four joints in the part allow our planner a total 10 degrees of freedom to utilize in planning a path around the pipes and railings of the environment.