RIP HW 1

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October 3, 2014

1 Problem 1

(a) **Compare the Methods of the Two Planners:**
Blackbox Planner
This planner operated by turning the given problem into a set of boolean satisfiability problems through two mechanisms. The front end is a graphplan technique where instead of state nodes and edges representing possible traversal, we have nodes of actions/facts and edges from facts -¿ actions or from actions -¿ facts affected by said action. Arranged in an alternating fashion: Facts, to possible actions, back to facts. It also uses backward chaining and iterative depth probing to keep from exploring too many extraneous nodes.

VHPOP Planner
VHPOP is a partial-order planner. This means it generates a lists of actions necessary to get to the goal, only constraining their order when absolutely necessary (One has preconditions, an earlier action must synthesize) It operates on a system of clever heuristics, and evaluating dead end states.

(b) **Which Planner was Fastest:**
Both took very little time, as this is a relatively small problem in terms of search space, but the Blackbox planner was still undoubtedly faster at 12 milliseconds versus the 5160 milliseconds of the VHPOP planner.

(c) **Why Might this Planner be Faster?**