Planning Historical Developments

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This research reports the highlights on the developments on AI planning and search, and their impacts on the current AI.

In the last years have been dramatic advances in the AI field, one of its main topics it has been the planning algorithms; [3] where these algorithms try to enable an agent to optimize a course of action that will achieve a goal. There are many approaches, but we are going to talk about three of them.

Graphplan [3] is an algorithm designed by Blum and Furst's in 1995, the main features on this algorithm are that is a really speedy planner due to reduce the amount of search needed to find a goal state from straightforward exploration of the state space graph and it also has a really good representations, which it gives a successful encoding of planning problems into propositional SAT.

The Boolean Satisfiability Problem (SAT) algorithms [2] are pretty common when trying to determinate if there exist an interpretation that satisfies a boolean expression, in most of the cases works to generalized clauses into a problem, using boolean algebra to determine a goal state or also to cut a search path through multiple nodes in a space search.

Planning Domain Definition Language (PDDL) [1] was the first modeling language to standardize AI planning domain and description languages. The two main features on PDDL are the domain which are all the predicates and operators called as actions, where each action will generate a possible path to a solution. The problem definition is second feature from PDDL which contains the instance of a problem that is an initial state and the goal to solve the problem.

References

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