

Research review

1. STRIPS

(Stanford Research Institute Problem Solver) is an automated planner developed by Richard Fikes and Nils Nilsson in 1971. The same name was later used to refer to the formal language of the inputs to this planner.

STRIPS is the first major planning system. The representation language used by STRIPS has been far more influential than its algorithmic approach; what we call the “classical” language is close to what STRIPS used.

2. Graphplan

Graphplan is an algorithm for automated planning developed by Avrim Blum and Merrick Furst in 1995.

Graphplan takes as input a planning problem expressed in STRIPS and produces, if one is possible, a sequence of operations for reaching a goal state. The name graphplan is due to the use of a novel planning graph, to reduce the amount of search needed to find the solution from straightforward exploration of the state space graph.

3. PDDL

The Planning Domain Definition Language (PDDL) is an attempt to standardize Artificial Intelligence (AI) planning languages. It was first developed by Drew McDermott and his colleagues in 1998 (inspired by STRIPS and Action Description Language among others) mainly to make the 1998/2000 International Planning Competition (IPC) possible, and then evolved with each competition.

These planning research has been central to AI since its inception, and papers on planning are a staple of mainstream AI journals and conferences. There are also specialized conferences such as the International Conference on AI Planning Systems, the International Workshop on Planning and Scheduling for Space, and the European Conference on Planning.