Stanford Research Institute Problem Solver (STRIPS)

STRIPS (Stanford Research Institute Problem Solver) is a problem-solving program implemented between 1966 and 1972. The problem proposed for the implementation of STRIPS was a mobile robot that could plan specific tasks based on its perception of the world (Anon., n.d.). The robot should find routes in order to rearrange some objects. The method used to describe the world model was the first-order predicate calculus. It was applied the process of General Problem Solver in order to find the world possibilities. The algorithm should find the best solution for a given goal, and verify if it is a relevant solution, in other words, if it reduces the number of actions that it needs to perform to achieve the goal (Nilsson & Fikes, 1970). Almost every planning system created after STRIPS uses some variant of it (Russel & Norving, 2003).

Action Description Language (ADL)

ADL (Action Description Language): The need of a powerful language to describe complex problems with lower computational costs stimulated the creation of ADL. Situation calculus allows one to describe complex problems, but it has high computational costs. In the other hand STRIPS has intuitive syntax and low computational cost, however it does not allow one to describe complex problems. The merge of the computational benefits of STRIPS and the semantics and expressive power of the situation calculus originated the ADL, so it becomes easier to encode more realistic problems (Pednault, 1986).

Planning Domain Definition Language (PDDL)

PDDL (Planning Domain Definition Language): in order to facilitate the comparison of the results of different planners, researches created PDDL to standardize the formalisms used in AI (Russel & Norving, 2003). For a given problem, this language is able to express the predicates, the requirements, the actions and its effects (Ghallab, et al., 1998).

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