

# Research review

## STRIPS

Strips stands for Stanford Research Institute Problem Solver, created by Fikes and Nilsson in 1971. It was the first major representational language for a planning system.[1]

It was primarily used as the planning system for the Shakey robot project at SRI.[1]

STRIPS finds a sequence of operators in a space of world models to transform a given initial world model into a model in which a given goal formula can be proven to be true. STRIPS represents a world model as an arbitrary collection of first-order logic equation. It uses means-ends analysis to find a model that satisfies goals. [3]

## ADL

ADL stands for Action Description Language, created by Pednault in 1986. ADL made it possible to encode more realistic problems[book], it does this in a few ways:

- Allowing states to be positive and negative literals[1]
- allowing the effects of an operator to be conditional.[1]
- going from a closed world assumption to an open world assumption[1]

## PDDL

PDDL stands for planning domain definition language, created by McDermott. PDDL was created in an attempt to formalise AI planning languages. Making the international Planning competition possible (IPC). The adoption of a common formalism for describing planning domains fosters far greater reuse of research and allows more direct comparison of systems and approaches, and therefore supports faster progress in the field.[2]

[1] Stuart J. Russel, Peter Norvig (2010), Artificial Intelligence: A Modern Approach (3rd Edition).

[2] M.;Long, D. (2002). "PDDL+: Modeling Continuous time dependent effects". Proceedings of the 3rd International NASA Workshop on Planning and Scheduling for Space.

[3] Richard E. Fikes, Nils J. Nilsson (1971), STRIPS: A New Approach to the Application of .Theorem Proving to Problem Solving'. 2nd IJCAI, Imperial College