Historical developments of AI planning and search

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In the field of AI, problem is decomposed and represented as all possible states and actions, planning technics, combining logic and searching, can take advantage of this structure and give us a good knowledge of solving the problem. This report gives a brief overview of three developments of AI planning and search, including the planning method: Graphplan, and planning language: STRIPS, ACL, PDDL, and introduces their impact and relations.

STRIPS, short for “Stanford Research Institute Problem Solver”, is the first major automated planning system designed as the planning function part of software for Shakey robot project, now it’s also referred as the formal language of inputs to this planning system. Its action representation has a huge impact on AI planning so that almost all languages for describing automated planning problems use it as base today. It’s action representation feature….., however, it is not compatible for many problems when problem comparison.

ADL or Action Description Language, is then developed to relax some restrictions in STRIPS language and make it more suitable to represent more realistic planning problems. What’s Improved in ACL compared with STRIPS?

The Planning Domain Definition Language(PDDL) was introduce in 1988