

Planning Search Research Review

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This review consists of important historical developments in the field of AI planning and search and how they impacted on the field of AI as a whole.

STRIPS (Stanford Research Institute Problem Solver)

STRIPS was a name for the planning component in software used in Shakey. Shakey was developed from 1966 through 1972 and it is the first mobile intelligent robot which can reason about its own actions. Shakey can perform visual analysis, route finding, object manipulation and more. Shakey became an ancestor of self driving cars, military drones, Mars rovers and overall field of Robotics and AI. Notably, one of the widely used in route finding and graph traversal algorithm, A* (A Star), was first described for Shakey machine.

ADL (The Action Description Language)

In 1987, ADL was proposed by one of former IBM staff member, Pednault. ADL is considered as an advancement of STRIPS. ADL removed some of STRIPS's constraints to handle more realistic problems. Unlike STRIPS, ADL allows negative literals in the states, doesn't assume the unmentioned literals are false (known as the Open World Assumption), quantified variables in goals, and more.

PDDL (the Planning Domain Definition Language)

STRIPS and ADL were inspiration for another extension of PDDL. PDDL is an attempt to standardise Artificial Intelligence planning language. It was developed to make the 1998/2000 International Planning Competition(IPC) possible. PDDL contains STRIPS, ADL, UMCP, and more. As PDDL for a common language, we are able to compare systems and approaches but also speed up progress in planning and search.

Works Cited

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