

Research Review

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STRIPS

In artificial intelligence, STRIPS is a problem-solving program (Stanford Research Institute Problem Solver). An initial version of the program has been implemented in LISP on a PDP-10 and is being used in conjunction with robot research at SRI. STRIPS is a member of the class of problem solvers that search a space of "world models" to find one in which a given goal is achieved. It was developed by Richard Fikes and Nils Nilsson in 1971 at SRI International. [1]([Richard E. Fikes, Nils J. Nilsson - 1971](#))

Graphplan

Graphplan is an algorithm for automated general-purpose planning for STRIPS-style domains, based on ideas used in graph algorithms. The name graphplan is due to the use of a novel planning graph, to reduce the amount of searches needed to find a solution from straightforward exploration of the state space. Planning graphs offers the means for organizing and maintaining search information that is reminiscent of the efficient solutions to Dynamic programming problems. Planning graph analysis appears to have significant practical value in solving planning problems even though the inherent complexity of STRIPS planning. [2]([Avrim Blum, Merrick Furst - 1995](#))

Multi-agent planning

Multi-agent planning involves coordinating the resources and activities of multiple "agents". It can involve agents planning for a common goal, an agent coordinating the plans. More than ever industry, space, and the military are seeking systems that can solve multiagent planning problems, such as those in supply chain management, coordinating space missions, and commanding mixtures of vehicles and troops. While many planners can handle some notion of concurrency, and many plan merging algorithms have been proposed, there has been little work on decentralized planning, competitive planning systems, evaluation of communication costs, and distributed continual planning. It is also worth noting that, although multiagent planning is not a new research field, many important contributions in this topic are quite recent. [3]([ICAPS 2005](#))

References

- [1] - <http://ai.stanford.edu/~nilsson/OnlinePubs-Nils/PublishedPapers/strips.pdf>
- [2] - <https://www.ics.uci.edu/~dechter/courses/ics-271/fall-06/project/a.blum97.pdf>
- [3] - <https://ai.jpl.nasa.gov/public/home/bclement/icaps05-workshop-map.html>