Partial Order Planning

Overview:

What is partial order planning?

Is the opposite of total-order planning

Known to solve the Sussman Anomaly

In this report, we will review 3 different partial order planning planners

* SNLP
* TWEAK (1987)
* REPOP

SNLP

* SNLP uses a causal link to connect the precondition of one action with the post condition of another (<http://homes.cs.washington.edu/~weld/papers/weld-snlp-commentary.pdf>). While the idea has been previously explored, the SNLP implementation was simpler than that in NONLIN and was proven by McAllester and Rosenblitt.

TWEAK

<http://users.cs.cf.ac.uk/Dave.Marshall/AI2/node127.html>

<https://pdfs.semanticscholar.org/e237/1b0c96bde6da4a243579d2cadfc6136c9e3d.pdf>

UCPOP

<http://homes.cs.washington.edu/~weld/papers/ucpop-kr92.pdf>

UCPOP & REPOP

<http://www.ai.mit.edu/courses/16.412J/ucpop.html>

<http://rakaposhi.eas.asu.edu/ucpop-revive.pdf>

For each algorithm, summarize:

Background, when it was found and by whom, what was it originally created for.

What is the key idea, if it improved upon an existing algorithm, what was it.

Pros and cons of the algorithm.

What contribition did it have on the field of AI search and planning as a whole?