# Research Review

## STRIPS

### Research contents

- STRIPS is the Stanford Research Institute Problem Solver. It is one of the autoplanning with Airtificial intelligent developped by Richard Fikes et al in 1971.
- The fundamental problem solver of auto planning.
- STRIPS is composed by below;
  - Initial state
  - Goal state
  - the group of the action, including precondition and postcondition.
- STRIPS only run one action in each turn, so solving complex problem is difficult for STRIPS.

#### References


- https://en.wikipedia.org/wiki/STRIPS


## Graphplan

### Research contents

- Graphplan is the automated planning algorithm developped by Avrim and Merrick in 1995.
- Graphplan generates the sequence of operation to the goal with input of the planning problem discribed by STRIPS.
- The name of "Graph" comes from the data structure of Graphplan to reduce the exploration of the ploblem space.
- This planner can use in STRIPS style domains.
- The Planning Graph has the property that make the constraining search quickly.

#### References


- https://en.wikipedia.org/wiki/Satplan
- https://www.youtube.com/watch?v=RqhSLCfZdys

# Partial Order Planning

## Research contents

- To achieve the goal, it devides the goal to the sub goals which can control in the each actions.
- If you achieve all subgoals in turn, you can achieve a goal.
- Especially by the space of choice, the sub-goal set with backward flow from the goal.
- Treat the conflict with logical method which check the past state and present state can be connect with action operator, and this is the pros to the totally order planning.

### References


- https://classroom.udacity.com/courses/ud409/lessons/1922019281/concepts/19409590450923
- http://pages.cs.wisc.edu/~dyer/cs540/notes/pop.html
- https://en.wikipedia.org/wiki/Partial-order_planning