

# Research Review about Formal Languages

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Project Name: Implement a Planning Search

This paper is about planning problem techniques in the context of planning problems. Three of them is introduced as below and then the relationships is described.

## 1. STRIPS

STRIPS stands for Stanford Research Institute Problem Solver. This was developed by Richard Fikes and Nils Nilsson in 1971. STRIPS is also the name of the automated problem technique.

You can express the procedures with finite processes by using this technique, such as Plane Cargo Problems.

## 2. PDDL

PDDL stands for Planning Domain Definition Language. It is a formal language which express STRIPS. It lets you express STRIPS by English words. Various problems can be described with a finite set of actions, preconditions, and effects.

## 3. Bread First Search

Bread First Search is one of the planning search method which is optimal. It can find solution to a STRIPS problem. It always find the shortest path, whereas it takes more time than other methods because it scans every single child state at the current depth level.

## 4. Reference

Stuart J. Russel, Peter Norvig (2010), Artificial Intelligence: A Modern Approach (3<sup>rd</sup> Edition)

Kory Becker (2015), Artificial Intelligence Planning with STRIPS, A Gentle Introduction