STRIPS1, the first major planning system, which can find a sequence of operators in a space of world models to transform a given initial world model into a model in which a given goal formula can be proven to be true.

Planners in the early 1970s generally worked with totally ordered action sequences. Problem decomposition was achieved by computing a subplan for each subgoal and then stringing the subplans together in some order. This approach, called **linear planning**, cannot solve some very simple problems, such as the Sussman Anomaly. A complete planner must allow for interleaving of actions from different subplans within a single sequence, which means **nonlinear planning** or **partial-order planning**.

The ideas underlying partial-order planning include the detection of conflicts and the protection of achieved conditions from interference. The construction of partially ordered plans (then called **task networks**) was pioneered by the NOAH planner2 and by Tate’s NONLIN3 system.

Partial-order planning dominated the next 20 years of research, yet for much of that time, the field was not widely understood.

In 1991, An implementation of McAllester and Rosenblitt’s algorithm4 called SNLP (Soderland and Weld, 1991) was widely distributed and allowed many researchers to understand and experiment with partial-order planning for the first time.

Avrim Blum and Merrick Furst (1995, 1997) ‘s GRAPHPLAN system which was orders of magnitude faster than the partial-order planners of the time. Planning as satisfiability and the SATPLAN5 algorithm were proposed by Kautz and Selman (1992), who were inspired by the surprising success of greedy local search for satisfiability problems.The BLACKBOX planner, which combines ideas from GRAPHPLAN and SATPLAN, was developed by Kautz and Selman (1998).

The most successful state-space searcher to date is Hoffmann’s (2000) FASTFORWARD6 or FF6, winner of the AIPS 2000 planning competition. FF uses a simplified planning graph heuristic with a very fast search algorithm that combines forward and local search in a novel way.

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