The first major planning system was STRIPS, which mathematically is a quadruple of conditions, operators, initial states and the specification of goal states, all of which comprise a basic formalization for expressing automated planning problems. This was a building block for subsequent logic languages. ADL (action description language), PDDL(Problem Domain Definition Language) are all thought to have been inspired by STRIPS.

ADL furthered the development in representational languages in a few important ways. Among the notable extensions are

1. by removing the assumption that unmentioned literals are false, and instead treating them as unknowns.
2. In addition, ADL support both positive and negative literals
3. Equality predicates is built in ADL while it was not in STRIPS.
4. ADL supports types.

PDDL was subsequently introduced as a computer-parsable, standardized syntax. It was developed in 1998 primarily to make international planning competition possible. Despite some dissatisfaction, it garnered praise for enabling considerable progress to be made in planning research due to its ease with which systems sharing the standard can be compared. PDDL definition contains two major parts: the domain and the problem definition. Domains contain predicates and operators while the problem definition contains the objects, the initial state description and the goal.