Examples of Important Historical Developments in the field of AI Planning

PDDL: The Planning Domain Definition Language (PDDL) was first developed by [Drew McDermott](https://en.wikipedia.org/wiki/Drew_McDermott) and his colleagues in 1998. PDDL is an action-centred language, inspired by the well-known STRIPS formulations of planning problems.

PDDL help standardized syntax for representing AI planning problems formalizing actions and has been used as the standard language for the Interna- tional Planning Competition since 1998.

Graphplan: Graphplan is an [algorithm](https://en.wikipedia.org/wiki/Algorithm) for [automated planning](https://en.wikipedia.org/wiki/Automated_planning) developed by [Avrim Blum](https://en.wikipedia.org/wiki/Avrim_Blum) and [Merrick Furst](https://en.wikipedia.org/w/index.php?title=Merrick_L._Furst&action=edit&redlink=1) in 1995. Graphplan takes as input a planning problem expressed in [STRIPS](https://en.wikipedia.org/wiki/STRIPS) and produces, if one is possible, a sequence of operations for reaching a goal state. Planning graph can be used to give better heuristic estimates. Using GRAPHPLAN algorithm helps search for a solution over the space formed by the planning graph.

First-order logic: First-order logic is complete ([Gödel, 1929](http://en.wikipedia.org/wiki/G%C3%B6del%27s_completeness_theorem)), compact and sound, and all its particular formalizations as deductive systems are equivalent ([Lindström, 1969](http://en.wikipedia.org/wiki/Lindstr%C3%B6m%27s_theorem)). First-order logic uses [quantified variables](https://en.wikipedia.org/wiki/Quantification_%28logic%29) over non-logical objects and allows the use of sentences that contain variables, First-order logic replacing the notion of linear time with a notion of branching *situations*, using a representation called situation calculus.

## References

[PDDL Background: <https://www.cs.cmu.edu/afs/cs/project/jair/pub/volume20/fox03a-html/node2.html>]

[https://en.wikipedia.org/wiki/Planning\_Domain\_Definition\_Language]

[https://math.stackexchange.com/questions/176263/is-first-order-logic-fol-the-only-fundamental-logic]

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[https://en.wikipedia.org/wiki/Graphplan]

[*Artificial Intelligence: A Modern Approach* by Norvig and Russell]

[[Labyrinth of Thought: A History of Set Theory and Its Role in Modern Mathematics]