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**Planning control rules for reactive agents.** (English) Zbl 0894.68138  
*Artif. Intell.* 95, No. 1, 67-113 (1997).

Summary: A traditional approach for planning is to evaluate goal statements over state trajectories modeling predicted behaviors of an agent. This paper describes a powerful extension of this approach for handling complex goals for reactive agents. We describe goals by using a modal temporal logic that can express quite complex time, safety, and liveness constraints. Our method is based on an incremental planner algorithm that generates a reactive plan by computing a sequence of partially satisfactory reactive plans converging to a completely satisfactory one. Partial satisfaction means that an agent controlled by the plan accomplishes its goal only for some environment events. Complete satisfaction means that the agent accomplishes its goal whatever environment events occur during the execution of the plan. As such, our planner can be stopped at any time to yield a useful plan. An implemented prototype is used to evaluate our planner on empirical problems.

**MSC:**

[68T20](#) Problem solving in the context of artificial intelligence (heuristics, search strategies, etc.) Cited in 7 Documents

**Keywords:**

[planning](#); [control](#); [reactive agents](#); [temporal goals](#)

**Full Text:** [DOI](#)

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