

Many contemporary computer games can be described as dynamic real-time simulations inhabited by autonomous intelligent virtual agents (IVAs) where most of the environment structure is immutable and navigating through the environment is one of the most common activities. Though controlling the behaviour of such agents seems perfectly suited for action planning techniques, planning is not widely adopted in existing games. This paper attempts to answer the question whether the current academic planning technology is ready for integration to existing games and under which conditions. The paper compares reactive techniques to classical planning in handling the action selection problem for IVAs in game-like environments. Several existing classical planners that occupied top positions in the International Planning Competition were connected to the virtual environment of Unreal Development Kit via the Pogamut platform. Performance of IVAs employing those planners and IVAs with reactive architecture was measured on a class of game like test environments under different levels of external interference. It was shown that agents employing classical planning outperform reactive agents only if the size of the planning problem is small or if the environment changes are either hostile to the agent or not very frequent.