

Carl-Johan Jorgensen, Fabrice Lamarche (2013). Combining Activity Scheduling and Path Planning to Populate Virtual Cities. Autonomous Agents and Multi-Agent Systems (AAMAS) 2013.

Abstract. When navigating in a city, daily activities organisation is strongly interrelated with the choice of a path between the places where these activities can be performed. Most of existing crowd simulation models relies either on scripted behaviour or on decision models in which path planning and activity scheduling are computed separately. In this paper, we propose a model combining path planning and task scheduling into a single process. This process takes spatial and temporal constraints into account, as well as agents' personal preferences. It produces a path in the city, associated with a time-constrained arrangement of tasks to perform. This model allows us to credibly populate virtual cities with agents performing consistent individual activities.