ABSTRACT
This paper describes an agent infrastructure centred on statechart-based actors for modelling and simulation of complex systems. Actors are lightweight reactive autonomous agents which communicate to one another by asynchronous message passing. Actor dynamism is specified through a “distilled statechart” which simplifies the expression of complex behaviour. The threadless character of actors conserves memory space and ensures efficient execution. The paper highlights current implementation status of statechart actors and demonstrates their practical use and programming style in Java through a manufacturing system model. Simulation experiments are reported. Finally, on-going and future work are summarized in the conclusions.

Keywords: Multi agent systems, statecharts, modelling and simulation, Java.
REFERENCES